No. 43.

No. 43. 1

Field Book

of

Willis Linn Jepson

Hotel Bristol,
Cairo,
Egypt.

If lost finder will receive £ 2 for return.

- 1926 -

4-260 Cairo, Egypt.

March 19, 1926 261

The following seeds were furnished by Abdel Kader Foad Effendi:

No. 10,974. Trifolium alexandrinum — Bersem Baali.
Not watered = 1 cut + seed crop.
Watered = 2 cuts + seed crop

No. 10,975.
Berseem Miscari (irrigated, 4 to 5 to 6 cuts).

No. 10,976. Berseem. Not watered. One cut only.

No. 10,977.

No. 10,978. Lathyrus sativus. Guilban.

No. 10,979. Pterospermum aceriifolium Willd. Large tree with broad leaves and large fruit, Horticultural Garden at Giza

No. 10,979 a. Anastatica. See top p. 256.

Jaffa, Palestine

- Arrived at about 10 o'clock and went to call shortly after noon on Herr Professor Dr. O. Warburg, Director of the Agricultural Institute of the Zionist Organization, at the Laboratory Building which has been built in Tell-aviv. He has a considerable scientific staff working on the agricultural plants and natural history of Palestine: a mycologist; a plant pathologist; a systematic botanist; etc, etc.

Dr. Warburg showed me his Pflanzenleben der Erde, three very freely illustrated volumes on the seed plants of all countries, the colored illustrations being very fine. He is of course the author of the monograph on the nutmegs, and is editor of a journal of tropical plants which is published in Berlin. The next day he took me bot- [Cont. p. 268]

No. 10,980. Senecio vernalis Waldst. et Kit.
Sandy soil

No. 10,981. Hypochaeris
Sandy soil. (B. didymal., var. c.)

No. 10,982. Biscutella columnae Ten.
Sandy soil.

No. 10,983. Allium erdelii Zucc.

No. 10,984. Astragalus callichrous Boiss.
Corolla purple.

No. 10,985. Withania somnifera (L.) Don.
Stems erect, in a clump from a perennial root.

No. 10,986. Anchusa
This boraginoid grew in sandy soil.

No. 10,987. ~~Pisum~~ Vicia narbonensis L.

No. 10,988. Lycium europaeum L.
Corolla lavender.

No. 10,989. Campanula Specularia
(Cor. purple.) Speculum-veneris (L.) Tanf.

No. 10,990. Fumaria parviflora Lam.
This fumarioid plant grew on a stone wall.

Jaffa, Palestine

No. 10,991. Adonis flammea Jacq.
This has a stunningly fine crimson flower. At a distance, its habit and foliage suggested a red-flowered Anthemis! Fields.

No. 10,992. Reseda alopecuros Boiss.

No. 10,993. Euphorbia helioscopia L.

No. 10,994. Medicago marina L.
Leguminoid sand-binder. Cor. canary yellow.

No. 10,995. Trifolium

No. 10,996. Alsine. Tenuifolia (discarded)

No. 10,997. Arenaria ? Alsine

No. 10,998. Valantia hispida L.

No. 10,999. 2 nos. arenaria serpyllifolia L. Daucus litoralis var.
An umbellifer with pink fls.

March 22, 1926

No. 11,000. Rumex pictus Forsk. (R. lacerus Balb.)

No. 11,001. Muscari racemosum maritimum Desf.
Sandy soil.

No. 11,002. ~~Lotus~~ Trigonella cylindracea Desv.

No. 11,003. Anchusa sp.
This boraginoid has purple fls.

No. 11,004. Salvia lanigera ? flue- Poir.
Cor. deep blue, strongly 2-lipped. This Labiate has very showy flowers.

No. 11,005. Alkanna tinctoria (L.) Tausch.
This boraginoid has deep blue corollas.

No. 11,006. Helianthemum lavandulifolium Mill.
This hypericum (?) has yellow fls.

No. 11,007. Silene colorata Poir.
Pink corolla

No. 11,008. Rumex bucephalophus L.
This polygonoid grew in sand dunes.

No. 11,009. Plantago albicans L.

Jaffa, Palestine

No. 11,010. Cyperus aegyptiacus L. Glotin. (C. capitatus Vank.)
This looks like Rhynchospora and may be Schaenus nigricans?

No. 11,011. Lotus commutatus Guss.

No. 11,012. Orobanche
Corolla dull white, lavender-tinted; at first (in bud) yellowish.

No. 11,013. Paronychia
~~Perhaps~~ P. argentea. Sand-dune

No. 11,014. Anthemis?
Rays pure white; disk yellow.

No. 11,015. Hymenocarpus circinnatus (L.) Savi.
Corolla saffron-yellow. Decumbent.

No. 11,016. Papaver ~~rhoeas~~ Syriacum Boiss. L.
Petals crimson with a black spot at base. Corn-Poppy.

No. 11,017. Eruex spinosus L. In

sand-dunes. Diffuse.

No. 11,018. Polycarpon asinifolium (B. v.) DC.
This looks like a Polycarpon.

No. 11,019. P. tetraphyllum L.
? Polycarpon

No. 11,020. Plantago cretica L.
Sandy fields.

No. 11,021. Adonis
Sandy fields

No. 11,022. Ranunculus
flowers yellow

Tel-a-viv. Lies next to Jaffa. It is a new town, built out of hand. It has the atmosphere of a boom place, like Los Angeles and like Los Angeles is built by outside money. I wondered as to its economic soundness. Dr. Warburg was amiably reticent but admitted that while the banks here would not give credit for building, credit in other countries was very widely estab- (cont. p. 270)

ranizing over the sand-dunes and sandy hills north of Jaffa. We came first to a Mohammadan graveyard where the botanizing was excellent. Then along the sand hills north, finding several characteristic sand plants (nos. 10,794, 10,806, 10,812), etc. Then we struck inland to the Nahr el Audscha (Nahr = river), a considerable stream, then back to Tell-aviv. On the way a fine* Zizyphus spina-christi. For the plants collected on this excursion see nos. 10,987 to ~~11,022~~ 11,023.

Prof. Warburg took me through his nursery of introductions: Seedlings of Cupressus macrocarpa, Pinus radiata, ponderosa, Laubertiana, Cedrus libani, and a host of acacias and australian

* a broad-crowned tree 25 ft. high.

shrubs and Eucalyptus species. And in every case the seed came from California! even the Cedrus libani. He had ordered seed from Sicily - but found it utterly untrustworthy as to name.

Professor Warburg spent 5 years in Java in his youth.

I came by motor from Jaffa to Jerusalem. The plain near the coast is highly cultivated. The fields are often bordered with hedges of Acacia Farnesiana. Then came next a rolling plain country of wheat and barley; then we entered the rocky hills and ascended gradually and then down into a broad gorge, then up again. It has now fallen dark and ahead I can see the lights gleaming on the Mount of Olives. I reach the American School of Oriental Research, at 6:30 p.m., Mar. 23, Thurs. and receive a welcome from Mrs. Albright - and later from Dr. Albright.

Cont. from bottom of p. 267.—
lished in other countries, especially America. In other words various rich Jews are kindly acting (cf. p. 158) as angels. A camel-train carrying sand for building passed us. The camel-drivers are Jews. They have learned to handle the camel said Dr. Warburg. On the whole the camel seems docile. Trains of several camels are often driven by a small Arab lad. Near the Museum of Antiquities in Cairo a small Arab boy made a camel kneel; the boy jumped on the camel's haunches; the camel very quickly got up. It reminded me of my young riding days. My pony would stand still until I started to mount — when it ↑, with foot in stirrup, would instantly bolt and I had to gain my seat quickly.

— Dr. Warburg asked for a book descriptive of California, a scientific account of its climate, topography, geology, zoology and botany. I told him of "Nature and Science on the Pacific Coast", but there is nothing. There should be a thorough-going up-to-date book of this kind.

On my way by train yesterday from Lydd to Jaffa we passed over a broad plain of wheat. For perhaps two miles the fields were populous with cranes (= white stork. See p. 368.) feeding — I should say 50,000 birds or more — perhaps 200,000 — a very large number. The bird is a large one, whitish body, black tail and black near ports, large bill, that is broad* and long.

* not broad like a pelican. I see them close, today, in fields at Megiddo — Apr. 15.

Collection of Specimens and Drying

Very few driers were brought with me from California and I find paper astonishingly scarce in Palestine. Drying out of specimens is a serious problem when one is traveling. In Egypt, traveling, and here, traveling, I spread out the sheets containing specimens singly over the floor of my bedroom. The folder is, of course, wet. It air-dries and is then gathered up with the rest and put back in press and strapped down — and the process repeated the following day. That is the folder acts both as an enclosing sheet and a drier. This system works after a fashion — but one must not leave the folder lying out too long. There is less danger in this winter climate in Palestine than in the dry California climate. It was interesting at Jaffa to pick up Polycarpon* and other plants that are immigrants in California. Dr. Warburg knew the plants very well. He is, like a true German botanist, interested in going into the field. Cont. p. 308

No. 11,023. Vicia hybrida L.
Stems erect; corolla yellow. Jaffa.

Tell-el-Nasbeh Mar. 28, 1926.

No. 11,024. Galium tricorne Stockes
Cor. white. Stony hillslope.

No. 11,025. Isatis alepica Scop.
Pod 1-seeded.

No. 11,026. Trifolium hybridum L.
Calyx with a callous margin or ridge at throat, its tube 10-nerved, its limb 2-lipped with the lower tooth enlarged, green, ovate.

* No. 11,018

No. 11,027. Cyclamen ~~coum~~ aleppicum ~~S.&S.~~
One of the glories of Palestine. Cor. pinkish white with a purple base to the petals. It is common in rocky places from Carmel to Jerusalem. It was in flower at the end of January when we were at Mt. Carmel.

No. 11,028. Aristolochia maurorum L. var. latifolia Boiss.
This grows in the young wheat on the hillslopes and is rather inconspicuous on the ground. The leaves are conspicuously 2-ranked! The corolla is very dusky.

No. 11,029. Asperula arvensis L.
Corolla narrow-funnelform, deep blue. Stony hillslope.

No. 11,030. Ornithogalum fimbriatum var. ciliatum
Perianth segments white inside, green outside with white

margins. Filaments dilated.

11,031. Bryonia multiflora Boiss. et Hldr.
This member of the Cucurbitaceae grew on a stony slope in a wheat field. Achenes at this stage are green, yellow and red, in one head; semi-immature.

No. 11,032. Lagoseris sancto L.
Stony hillslope. Cichoriad.

No. 11,033. ~~Peltaria~~ Clypeola echinata DC.
(Clypeola)
Strange crucifer. Fls. yellow.

No. 11,034. Orchis anatolica Boiss.
Cor. pink and sepals Seems near O. saccata except for "spur half as long as ovary" - Post. Hill top at Ramallah.

No. 11,035. Bellevalia flexuosa Boiss.
Pods triangular. Perianth white. Stony hillslope.

No. 11,036. Thlaspi perfoliata L.
Crucifer, good soil.

Tell-el-Nasbeh, Jerusalem.

March 28, 1926

No. 11,037. ~~Mertensia~~ Symphytum palaestinum Boiss.
Cor. white. 3 ft. high, branching.

No. 11,038. Scandix pecten-veneris L.
Rich soil, rocky hillslope.

No. 11,039. Salvia
Upper pair sts: Lower end of connective bulbous-dilated, connivent with corresponding organ of the other stamen of the pair, and thus forming a sort of sac.
Lower pair of stamens reduced to very short rudiments (½ mm. long) but with obvious vestige of anthers. Corolla a beautiful lavender-blue, the upper lip broad, sickle-shaped. Well-worth cultivation.

No. 11,040. Bongardia chrysogonum L.
Ovary broadly ovate, with about 8 longitudinal wings, a[illegible]e, with 4 basal ovules raised on distinct stalks. Stigmas 4. Petals narrow, obovate, yellow, with a small pit-or "pore" at base* Anthers with elastically upcoiled valves! Petals characteristically fugacious (Berberid.)

No. 11,041. ~~Galium~~ Callipeltis cucullaria var. aspera
Amongst rocks. Cor. pale yellow.

No. 11,042. Ajuga chia (Poir.) Schreb.
Filaments sparingly hairy. Style slightly hairy on one side! Upper lip of 2 very short lobes. Lower lip: middle lobe much enlarged, roundish, but broader transversely, notched at apex, yellow, purple-dotted on throat; the lateral lobes very short, tooth-like and inconspicuous. Cor. turning pink in age. Upper lip transversely quadrate. ~~Scrophulariaceae~~. Perennial.

* When I first looked at the flower of this in the field I thought it a branched panicle of a Monocot; the

-over-

leaves were hidden in the grass. As soon as I saw them it was obvious that the species was not a Monsoon. When I looked at the stamens under my dissecting lens and saw the lid-covered anther-cells I at once knew it must be Berberidaceae.

No. 11,043. Lotus judaicus

Cor. bright yellow. Stems diffuse, from a perennial root, involved in Burnet scrub. Rocky hillslopes. Boissier says it may be known by its bright orange tinge.

No. 11,044. Lathyrus blepharicarpus Boiss.

This pea has large fls. with the corolla of a rather curious pink-brown color. Rocky slope.

D.F. Higgins says: "I knew Frank N. Meyer, the agricultural explorer in China. I knew him well and ate many a meal with him. He was a fine type. A splendid

man. How did he die? Well he was drowned in the Yang-tze-kiang River and there is hardly any doubt that he committed suicide by jumping off the boat, the reason being that he went crazy. My belief is as stated. Of course it will never be known positively; but it was clear to me that the natives got on his nerves - and if you permit - that you are lost - because there is no relief for your loneliness. His body was found on the river shore which is a wonder because the Yang-tze-kiang is a wonderful big river. Meyer should not have been kept out in China so long. They should have brought him home for a spell.

The natives in China did not get on my nerves. I liked them immensely. The Chinese I take to and admire tremendously.

You are in no danger when with them. They are a people who investigate first and kill afterwards. But here in this land the Arabs kill first. There is never any doubt of their hatred of the white man. They look like a set of cutthroats and villians and they are. They are liable to get on my nerves and this is something I shall have to watch out for."

— D.H. Higgins says: "I think it was someone in Nebraska that sent Rydberg (Dr. P.A) three specimens of Rubus cut from the same plant and Rydberg named them as three distinct species. I had the story from Peterson of Colorado College."

D.H. Higgins is the civil engineer of the Megiddo Expedition. He presented me to Dr. Hosdick of New York, at Ramallah yesterday.

— At the American Colony I met Williams. He says: The French made a bad mess of it in Syria. They should, in the first place, have gone in and cleaned up the Druses. They failed to do that and now they want to placate them. The Druses laugh at them. They say to the Druses that the Druses must first lay down their arms and then they will give them local autonomy. The Druses reply: We know a gun when we see it. "But who trusts the word of the French. "We will rely on our arms". Besides what can the French do? They can't conquer the Druse territory. There is nothing to capture. The Druses can't be cornered.

Their (the French) army is terribly inefficient. Their motors get out of gasoline on main-traveled roads

↑ photog. for Nat. Geog. Mag.

and the driver has no money to get more. They overturn a tank on the broad road to Sidon, where an ordinary car can turn at 20 miles an hour, and where a tank should race around. The truth is the French are decadent. They have lost their grip. Any other nation that had its fingers burned as would quit; but they can't, because they feel it would be taking a back seat with Spain and other decadents. Towards the end of the war French morale was nothing. Whole companies were actually mutinying and refusing to fight. It was only when America came in that they steadied at all. The war was lost, beyond any question if America had not come in. It was funny. Every American soldier had to pay his fare on a French railway."

No. 11,045. Lepidium draba L.
Mt. of Olives, in edges of the grain fields.

No. 11,046. Lamium moschatum mill.
This labiate is white-fld., with a hood-like or concave upper lip which one can close down over the lower lip like a jaw, covering the two erect lateral teeth and fitting nicely against the expanded middle lobes of the lower lip. Mt. of Olives by Garden of Gethsamanee.

No. 11,047. Hypecoum procumbens L.
This fumariaceous plant grows in good soil near the Garden of Gethsamanee. Fls. yellow.

No. 11,048. Reseda decursiva Forsk.
Mt. of Olives.

Apr. 2, 1926

A. Willard Jones
Ramallah, Palestine
Friends Boys School

D. F. Higgins came in from Ramallah, where he has been surveying Tell-en-Nasbh for W. F. Bade, and I went out to Ramallah from Jerusalem with him and stayed all night at the Friends Boy's School, where A. W. Jones is headmaster. Mr. and Mrs. Jones are charming hosts and I enjoyed the stop very much. A young Arab woman, a teacher in the school, donned a bride's costume, the distinctive embroidered dress of the Ramallah women and an embroidered head-dress which had (Cont. p. 285)

Apr. 3, 1926

No. 11,049. Fumaria densiflora DC. Fumariaceous annual.

No. 11,050. Veronica cymbalaria Bod.

No. 11,051. Helianthemum salicifolium (L.) Mill.

No. 11,052. Allium subhirsutum L. Stamens without cusps; filaments subulate.

No. 11,053. Orchis

No. 11,054. Gladiolus aleppicus Boiss.

No. 11,055. Orchis sp.

No. 11,056. Fumaria parviflora Lam. This fumariod plant is annual and white-flowered.

No. 11,057. Ornithogalum tenuifolium Guss. Perianth white, broad green band on back. Filaments dilated downward.

No. 11,058. Orchis sp. Apr. 3, 21

Flowers of this orchid lavender-pink.

No. 11,059. Valerianella (L.) Moench. Vesicaria

"This forage has an inflated calyx."!

No. 11,060. Allium hirsutum Zucc.

No. 11,061. Parentucellia latifolia (L.) Carmel. (Euphrasia l.,L.)

No. 11,062. Fibigia nostrata (Schm. Boiss. (Farsetia Turga) Fls. pale sulphur-yellow.

Pod very flat; style long.

Cont. from p. 284.

first, a band of gold pieces over the brow, then an arch of silver 10-piastre pieces, so closely massed that only the edges show, and third much rich embroidering with a pendant under the chin, hanging on breast, terminating (Cont. p. 29

No. 11,063. Linum pubescens ? Russ.

Styles united except at apex! the branches 5. Stamens united at base! Corolla beautiful virile pink. 'Ain Sinia.

No. 11,064. Anchusa hybride Ten.

This forage has deep purple corollas.

No. 11,065. Helianthemum sp.

This is woody at very base, this so small. Stems spreading or decumbent; corolla yellow. Presumably Helianth.

No. 11,066. Salvia

Cor. deep red; upper lip falcate; middle lobe lower lip round. Calyx 2-lipped, the upper lip with 3 short convivent teeth; the lower lip with 2 short teeth. Each end of connective with a spoon-shaped structure, convivent with the structure of other pair.

Stamens 2; vestiges of other pair not obvious. Style and stamens glabrous. Inside of corolla-tube glabrous. Appears nearest S. viscosa; but out-of-range.

No. 11,067. Arenaria tenuifolia L. Sinjil. This caryophyll grew on a rocky hillslope; cor. white.

No. 11,068. Trifolium pilulare Bois. Sinjil. Decumbent or prostrate.

No. 11,069. Vicia gracilis Lois. Cor. blue. Sinjil.

No. 11,070. Orchis sp. Sinjil. Same sp. as 11,058.

No. 11,071. Smilax aspera L. Sinjil.

No. 11,072. Rhamnus ~~punctata~~ oleoides. Flower parts 4! Corolla none! Sinjil.

No. 11,073. Quercus coccifera L. Sinjil. Bushy shrub 4 to 6 ft. h.

No. 11,074. ~~Campanula~~ Specularia speculum-veneris (L.) Tanf. Cor. blue. Sinjil.

No. 11,075. Corolla pink. Labiatae. Sinjil.

No. 11,076. Cynoglossum creticum Mill. This borage has brownish flowers veined, turning blue with purple veins. Sinjil.

No. 11,077. Lonicera etrusca Santi. Cor. buckskin yellow with pink tube. Wadi en Nimr.

No. 11,078. Discarded Trifolium purpureum. Cor. large, pink. Huwarah.

No. 11,079. Trifolium sp. Huwarah.

No. 11,080. Tetragonolobus purpureus Moench. Corolla crimson red, or deep brick-red. Pod 4-winged. Huwarah.

No. 11,081. Hippocrepis ~~siliquosa~~ constricta Kze. Diffuse or decumbent

stems. Cor. yellow. Huwarah.

No. 11,082. Medicago orbicularis
Diffuse or trailing stems.
Probably M. orbicularis.

No. 11,083. T. globosum L.
This Trifolium has decumbent stems. Huwarah.

No. 11,084. T. agrarium
This Trifolium has pinkish flowers. Huwarah.

No. 11,085. T. spumesum L.
Corollas yellow. Huwarah.

No. 11,086. Medicago
M. tuberculata Willd.
(Presumably M. denticulata.) Huwarah

No. 11,087. Salvia verbenaca var. Sclarea
Labiate. Huwarah.

No. 11,088. Malva sylvestris L.
Corolla pink, fading lavender. Bractlets 3, distinct. Petals with the claws densely short-ciliate. Burka.

No. 11,089. Arum palestinum.
Burka.

No. 11,090. Fumaria parviflora Lam.
'Arrabeh. Fumariaceæ.

No. 11,091. Chrysanthemum coronarium Lam.
(Looks like C. segetum.)
'Arrabeh.

No. 11,092. Anchusa strigosa Labill.
This borage has white corollas. The crown consists of a crest of penicillate or slender processes and is quite remarkable. 'Arrabeh.

No. 11,093. Scrophularia xanthoglossa Boiss. et Bal.) Boiss. var. hispidula
Corolla purple. Wonderfully suggestive of S. californica! in aspect, as to the inflorescence. Arrabeh.

No. 11,094. Trigonella coelesyriaca Boiss.
'Arrabeh. Flowers yellow. Legum.

'Arrabeh, Palestine. Apr. 3, 1926

'No. 11,095. Trigonella sp.
'Arrabeh. Leguminoid.

'No. 11,096. Scabiosa prolifera L.
'Arrabeh. Dipsaceae. Fls. white.

Cont. from p. 286. — in a gold coin of 400 piastres. (She danced a native country dance for us, singing her accompaniment, the rest of us keeping time by clapping hands. The school is evidently well-managed and is doing useful work — as one would expect from the Society of Friends. cf p. 305.

The next morning we ran down to Tell-en-Nasbeh. The Tell is coming into lovely flowering with a great many interesting plants to greet one at each new visit. We are (Cont. p. 296.)

Megiddo, Palestine, Apr. 4, 1926.

'No. 11,097. Echium plantagineum L. Corolla with blue throat and limb — the delicate blue of Pentstemon heterophyllus — changing soon to luminous pink — the whole corolla thus pink, as the tube is pink from the beginning. Corolla irregular, with oblique limb. "Lower lip" of two transversely oblong-quadratish lobes, the odd stamen opposite the sinus of this pair. Lateral lobes twice as broad as those of the lower pair; upper lip of one lobe somewhat similar to those of lower pair. The fir lobes are really much alike, but lie on an (save for the greater breadth of the lateral ones) oblique plane of the throat, so to speak. The lower odd

stamen has been referred to. The pair next to this one (stamen) are shorter than the upper pair of stamens. All the stamens are inserted at or near summit of throat. Calyx-divisions (, rather,) nearly distinct, with a clear line or nidnerv; lanceolate, hirsute. Style densely hirsute, exserted, (short-) cleft at apex to the depth of one mm. Stamens: filaments decurrent on tube in relief. Cor. 26 mm. long.

Achenes inserted by base to gynobase.

Cor.-tube and throat without scales. The longer stamens are exserted from throat. Corolla broadly funnelform.

— Yesterday O. F. Higgins, the geologist of the Megiddo Expedition, and I were walking over the summit of the Megiddo Tell observing the plants. One individual only was noted. (no. 11,097) The tell is a large roundish hill with flat top, — and rather steep sides — the diameter on top being on the average about 500 yards. It is the old Armageddon.

No. 11,098. Orchis patustris (maculata L.(?))

Swamp at Megiddo. Lateral sepals turned backward like a pair of wings. Lip fan-shaped, 2-lobed and more or less unequally toothed in center. Petals and upper sepal forming a hood (erect). Flower purple. Spur thick, cylindric, a little shorter than ovary, turned upward.

no. 11,099. Corolla pale blue, ↑ Veronica anagalis-aquatica L.
Filaments of clavate.

Cont. from p. 292

wearing a way ↑ through the grain by our feet
and I call it-

The Path through the Wheat.

Scarlet Poppies and clovers give color, splendid clusters of Cyclamen latifolium grow in the rocks and my eye is lured by the prim-ly 2-ranked leaves of Aristolochia maurorum with its clusters of flowers below the leaves at the ground. See also nos. 11,049 to 11,062.

Higgins (cf. p. 280) and I drive north through the hills of Judea next morning (April 3). We stop to botanize at various places. As we go north we catch fine views of Mt. Hermon

lifting its snowy top into the sky, covered with snow for 3500 or 4000 feet perhaps of its 9400 ft. in height. Again and again we see it, for the air is charmingly clear today and the mountain is often framed between the hills or through the passes.

One of the places we stop to botanize is 'Arrabeh. A hill rises abruptly to left of road with rock ledges which give a shelter to thousands of flowering plants of many species, leguminoid and scrophulariaceous plants with a fine showing of no. 11,091 (Chrysanthemum segetum). It is a beautiful quiet day. I look across the valley and hear the peasants talking on the opposite slope, a slope rising

gently through wheat fields to olive groves and vineyards with a village near the top of the hill. One can hear cocks crowing through the lazy air and villagers singing. cf. p. 304.

And so we go on once more and pass through the vale of Dothan, a broad bare vale of wheat-fields and pasture lands lying like a great flattish bowl in the hills, not a tree or habitation in it — save only at the eastern end, above the valley level a bit, there is a low dwelling hidden nearly, by olive and big trees and stone walls. And so we go on again — and come suddenly out of the hills at Jenin on the edge of the great plain of Esdraelon — Jenin compacted like a nut with streets so narrow our buck

can hardly get through and then at once out into broad lonely spaces again. — But we stop in Jenin a moment for water — at the spring which flows like a young river from the rock — telling the story of every town why it is in that place.

And now we run across the great plain by a wagon track, following the western side to the Tell of Megiddo — a striking old hill-town site — made by humans, this Tell, says Higgins — rising boldly on the edge of the plain and lying on the very foot of the hill slopes. On the lower terrace the Megiddo Expedition has built a square, consisting of living quarters for the staff, laboratories and workrooms for the care, study and records of the excavations to be made

here. Dr. Fisher is head of the expedition, which is one of the various Breasted expeditions financed by John D. Rockefeller Jr.

A room on the second floor looking east across the great plain is given to me. Before me lies Mt. Tabor and Little Hermon, with the great opening to the Jordan River, to the right. One can see right through to beyond Jordan, to the mountains of Moab, and understand at a glance why this should be the great highway of old, the easiest passage to and from Damascus and to and from Egypt. So by this passage came and went the conquering armies of old — wherefore Armageddon.

To the left of Mt. Tabor rise the hills of Galilee and as

— cont. p. 302 —

No. 11,100. Gladiolus ~~vastum Gaul~~ allepicus Boiss.

Perianth parts consisting of 3 obovate segments above and 3 ovate segments below, the latter more abruptly narrowed to the claw than the former and with a central whitish nerve at middle. Perianth a beautiful pink - Stigmas 3, expanded upward gradually but distinctly. Anthers longer than filament. Stamens 3. Axis of raceme flexuous. Grain fields.

No. 11,101. Bupleurum (B. subovatum) POST protractum Link & Hoffm.

Flowers pale yellow. Margins of grain fields.

No. 11,102. Fumaria micrantha Lag. Sepals round-ovate, dentate. Flowers pink.

cont: from p. 300.-
night falls one see the lights of Nazareth shining across the plain. To the right of the gap to the Jordan is Gilboa.

No. 11,103. Acanthus syriacus Boiss. Corolla yellowish-white or greenish-white, its lower lip expanded above and a little 3-lobed, green-nerved and green-veiny; upper lip obsolete. Stamens 4; anthers woolly. Upper and lower calyx-lobes foliaceous, the upper exceeding, the lower equaling the corolla. Later calyx-lobes roundish, submembranous, inconspicuous. All calyx parts distinct or nearly so. Bract broad and strongly spiny-margined; lateral bractlets nearly as long, very narrow, spine-tipped. Stigma 2-cleft. Raceme 4-ranked. Plant from a horizontal rootstock, the base of the plant also developing underground runners which give rise to new plants. Correction: it is the rootstock which gives rise to roots which, in part at least, run horizontally and give rise to new plants.

No. 11,104. Mandragora officinarum L. The heavy berries on their peduncles lie along the ground; and are somewhat hidden by the rosette of basal leaves, these very large and coarse. Cont. p. 392.

No. 11,105. Carex distans L. Swamp by the great spring.

No. 11,106. Reseda Rocky hillslope.

-Cont: from p. 298. 'Arrabeh was a lovely place to stop. It was with a sense of quiet contentment that I sat on the hillside amidst the flowers and breathed the dry air and basked in the warm sunshine. It was a scene typical of a quiet country side in Palestine. The wheat stood lush and prosperous and promising in the fields and the fig trees are just coming into leaf.

At Ramlah Mrs. Jones told me that in the village baking ovens sometimes fragments of stone stuck to the bread loaf, whence "he asked for bread and was given a stone.

An auto nearly ran over a 3/4 grown sheep near Damascus Gate but an Arab lad rushed in and pulled it out of the way.

The sheep was much frightened and refused to be led by the Arab man, its owner, though coaxed and pulled and persuaded again and again; finally the Arab took it up into his arms and walked off with it.

At Ramalah I was given a bedroom that gave out northerly I could see from the eastern window the sun rise from over the mountains of Moab; and westerly one can see the Mediterranean.

Cont. from p. 292.

No. 11,107. Vicia angustifolia L. Lathyrus perhaps. Corolla purple. Banner notched. Wings shorter than banner; keel 1/4 as long as wings, very obtuse, inky-tipped. Upper calyx teeth the longer. Stamens 9 and 1, the single one not very distinct. Style

with an oblique but emplete ring of hairs under the stigma. Flowers solitary. Flat near spring; [illegible] Rubus bushes. Flowers sessile, axillary.

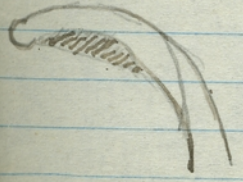
No. 11,108. Lathyrus aphaca var. Flowers 1 or 2 on a long slender axillary peduncle, Cor. canary yellow. Style hairy down one side. Stamens 9 and 1. Calyx-* lobes subequal, each with 3 transparent nerves. In tangle of Rubus on flat. Banner truncate, not notched.

No. 11,109. (Lathyrus) Vicia sp. Cor. white. Banner orbicular, strongly notched. 2 upper calyx-teeth very short, 3 lower long; calyx-tube marked. Style with a short-cylindric brush

* Calyx deeply cleft!

below the stigma. Stamens 9 + 1. In Rubus thicket on flat.

No. 11,110. Pisum humile Boiss. 2 upper calyx-lobes much broader and a little longer than the 3 lower. Peduncle 2-flowered. Corolla pink. Banner broadly fan-shaped with a notch at apex, wings united behind keel and so separating keel from banner; wings not touching keel, forming a sort of pocket for keel, a pocket open in front. Corolla zygomorphic flower.



Style stigmatic on upper side, next to banner.

Stipules very prominent! cordate-perfoliate! In gram

field just below Megiddo station.

No. 11,111. Lathyrus sativus var. stenoph.

Corolla buckskin color. Style expanded at apex into a broad thin spoon-shaped structure, the concave side pointing toward the banner, this very broad and round (Cont. p. 314.)

Cont. from p. 273. Of course specimens are better put in press in the field and at once. But even so, sheets should be opened at end of first day in press and the parts "straightened out", that is arranged naturally, so as to look like or at least suggest as strongly as possible the aspect and habit of the plant in the field. I have known botanists whose specimens looked

like "wilted rags" and were very unsightly; but they professed that they cared nothing about the appearance of the specimens but only for their utility. The only scientific justification for spending time in preparing good-looking specimens is that such specimens furnish better material for comparison and study. The appearance, by which I mean, the aspect of of a specimen may be of great importance. The earliest or type specimen may be very imperfect as to flowers or fruit and the material may be scanty; but if the specimen, such as it is, has been, or rather was well dried, it may suffice for the informed and critical student of the genus, the student who has worked on the genus so long that aspect and texture

are familiar to him in minute detail; for texture is often of great consequence in making decisions.

Dr. Clarence S. Fisher and I were sitting at tea one evening when the lights of Nazareth in the hills of Galilee were beginning to show in the gathering dusk. A little string of donkeys went by outside and I asked how early donkeys appeared in the sculptures. He said 3300 B.C., that is in Egypt. The horse did not appear until much later; for the horse came from Siberia, whereas the wild ass is indigenous in the region of Egypt.

No. 11,112. Galium sp.

By rock outcrop in wheat field.

No. 11,113. Saponaria vaccaria L.

Corolla 12 mm. broad, luminous pink. Petals crenulate. This member of Caryophyllaceae is a tenant of the wheat fields. I found only 2 individuals. Later: not so rare.

No. 11,114. Astragalus sp.

This leguminous plant forms a coarse herbaceous "bush" 2 to 3 ft. high. It is perennial, has only 2 to 4 stems in a place (from one root) and the stems are unbranched — still it looks very "bushy". This is because the few stems are thickly clothed with long spreading pinately compound leaves, so that the petioles and midribs replace branches. The flowers are in 2 or 3- flowered racemes (↑ or 4-) (↑ short-) borne in the axils and since the leaves are dense, the flower clusters are dense. At the time of gathering this the lower parts

of the stem bore fruits and the upper parts (back of the growing shoot tip about 8 cm.) bore flowers. Flowers 3.7 cm. long. Corolla yellow. Flower narrow. Banner narrow (7 mm. broad). Calyx-teeth slender, rather densely pilose. Stamens 10 (9 and 1) the tenth quite free; free portions of filaments alternately long and short. Style slightly hairy below. Auricle of wing broad and short. Grain fields.

No. 11,115. Sedum rubrum (L.) Thell.
On rock outcrop in grain field.

No. 11,116. Filago germanica (L.) Huds.
Tribe Gnaphalieae.
With 11,115.

No. 11,117. Anthemis?
Rays pure white, reflexed in

age. Presumably Anthemideae.
No. 11,118. grain field.
By rocks in grain field.

No. 11,119. Umbilicus intermedius Boiss. (Cotyledon i.) The lowest leaves are peltate orbicular with the petiole excentric so to speak. The plants grow in crevices of rocks and the rootstocks are so nicely imbedded that my botanical pick did not succeed in dislodging anything but the smallest fragment. Corolla greenish, 5 mm. long, (Cont. p. 315)

No. 11,120. Tetragonolobus purpureus Moench.
Pod 4-winged. Corolla deep red.

No. 11,121. Nasturtium fontanum (Lam.) Aschers.
Abundant in the streamlet below the great spring: to 4 ft. l.

No. 11,122. Juncus
With 11,121.

No. 11,123. Geranium dissectum L

Corolla pink. – Meadow flat by spring.

Cont. no. 11,111. slightly not ched. Grain fields.

v No. 11,124. Malva
Waste flat by spring. Fls. pink.

v No. 11,125. Rhagadiolus stellatus
Flowers yellow. Cichoriad.

v No. 11,126. Medicago
Flowers small, yellow. Flat by spring.

v No. 11,127. Alsine Tenuifolia (L.) Crantz.
Old field. chalepensis

v No. 11,128. Linaria ~~Triphylla L.~~
Corolla white; upper lip deeply cleft but the lobs parallel. Lateral lobes of lown

lip spreading. Therefore the extended (at right angles to middle lobe of lower lip. (not prolonged) middle lobe of lower lip completes a sort of cross; so that the flower is falsely cruciferous. Palate of lower lip with a dense fringe of hairs on it. Grain field.

Cont. no. 11,119. 5-cleft, the 4 stamens inserted high on the tube, very short, included. Corolla lobes incurved-approximate, distinctly apiculate! Bracts narrowly linear or setaceous, but not stiff or rigid. Carpels of 5 distinct follicles! Plant fleshy.

No. 11,129. Styrax officinalis L.

Corolla white. Banks of the Kishon and rocky slopes of Carmel. Apr. 9. Stamens 16, sometimes with the filaments nearly, what is almost wholly united in pairs, — 2 cases of this sort in the count of 16. Stamens inserted in a ring on the base of the corolla — the adnation longitudinally = 3 mm. This shrub was 12 ft. high and on the bank 6 to of the Kishon looks like a willow at a distance!

No. 11,130. Asphodeline lutea L. Tuned per. segments oblong but tapering below, pale yellow; outer segs. reddish-yellow. Stamens 6; 3 long with large anthers, 3 short with

small anthers. Style very very shortly 3-cleft (for about ½ mm.); stigmas 3, globose but minute. Filaments with dilated bases approximate so nearly by their edges that these bases form an apparent sac in which the ovary is enclosed. These bases have their edges set with short spreading minute processes or trichomes. Ovary 3-celled with central placentae and several (or a few :) ovules. Ovules prob. 2 in each cell. Gumbo flat near S. east end of Mt. Carmel.

Malva sylvestris L.

No. 11,131. ~~Hibiscus~~ (?)

Petals a beautiful rose-pink, 4 cm. long, not notched or not uniformly.

No. 11,132. Eremostachys laciniata L. Labiatoid. Lower lip roundish in outline when

spread out, the lobes subequal, the middle one brown, notched with a tooth each side of the notch; lateral lobes dull white. Ovary densely hairy. Calyx truncate, with 10 short round lobes like crenulations. Calyx densely woolly outside. Upper lip corolla strongly arched with a dense wavy fringe on the margin, woolly above, i.e. outside. Middle lobe lower lip fan-shaped with upturned edge. Upper pair of stamens: inserted high in upper lip under hood, adnate downward and terminating at summit of tube (base of throat) in an enlarged (gradually enlarged) structure which ends abruptly in such a way as to seem truncate and seem to show free ends to fibres, as if the filament were a fascicle of fibres gone

blended but "frayed" at the very end of the fascicle. Lower pair of stamens inserted near summit of throat; their filament blended with throat down to summit of tube. At summit of tube is a fleshy ring bearded with short setae on the upper side. Forming colonies, so tall and striking as to suggest miniature forests. Corolla 3 cm. long. Lower lip longer than the hooded upper one. Upper lip strongly arched. Lower lip conduplicate, i.e. with the sides turned downward, The calyx should be interpreted as 5-lobed, with a hook in the notch of each lobe. Leaves green, wrinkled, glabrous above, hirsutulose on veins beneath. Upper lip not only hooded but somewhat compressed. Cf. Post's description, especially generic, and harmonize. Anther-cells

divergent, with a fleshy white bulb on the back of each cell.
– Edge of lowest slopes of foothills, borders of plains, at SE. side Mt. Carmel.

– D.F. Higgins and I went to Haifa today by truck, taking two Arab servants with us. It were better to say that I "went along". It is a fine beautiful day with large white clouds hanging lazily in the sky. Great pools of yellow (Chrysanthemum segetum) flack the wide plain of Jezreel and make golden slopes on the hills. Once such we can see away across the plain on the hills of Galilee below Nazareth. It rained Saturday to Monday very heavily and we have constant trouble getting the truck through many spots on the wagon track which follows the edge of the foothills. As we are working to get out of a very wet spot a small group of Arabs on donkeys come riding along, in single file as always. Higgins called to one and said as they are passing us: "The one in front is a descendant of the Prophet". Sure enough he had the green band on his fez which is the badge of Mahomet's descendants. He had a shrewd rather keen face, bronzed, and was about fifty years old. He did not condescend to much in the way of greetings. We got out of our muddy place, went on at a fairly rate for awhile, and passed the Moslems in the course of two hours several times in this way. So that I say to Higgins: The tortoise and the hare. A considerable brook, for this land, comes down, some five miles from Megiddo; in some of its quiet stretches it is while

with the flowers of Batrachium-sheets of it. Along the edge of the foothills, at intervals, there are springs, as at Megiddo. These are on a fault line and in some places we ride over lava extrusions. Higgins remarks that Arabs behave at a spring just the opposite of us. The Megiddo spring is a fine large flowing bubbling spring. When the Arab comes to it he washes his feet in the spring, expectorates and may urinate, washes his hand and finally takes a drink. Nor does he do all this some distance down — no, he must go right to the heart of the spring. Nothing else will do. We also overtake camel trains. Camels in this region are amused to pasture, i.e. away from the main roads, and the center camel or two turned in frightened and tangled up the train. Now, it was interesting to notice his motions. He hunches himself up behind with a short hasty motion, something like that of an ostrich or a turkey. I cannot get over my notion that they show reptilian (cf. p. supra) and avian characteristics. — All through the hills, here and there, we see the black tents of the Bedouins. Higgins says some are semi-nomads; they live in tents all the year round but have a piece of land which they cultivate. and move about somewhat

The "country side" is rather pretty in places. Occasionally there are little orchards of almond and fig surrounded by cactus hedges (Opuntia ficus-indica Haw.). Higgins says camels feed on the "slabs". Of course each time we get stuck in the mud the engine is killed and has to be cranked

again. The Arabs can seldom do this though they try; they can't get the trick of it. Higgins mostly does it; I do it sometimes.

The beauty of the wild strips along the way is very great. The assemblage of flowers is lovely; (cf. p. 354.) an Umbellifer with radiate flowers on the edge of the umbels looks almost like old lace and gives a foil to the anemones, poppies, chrysanthemums and Echiums. Now we come up along the edge of Mt. Carmel and look up to its high slopes which are quite brushy and wild. We get stuck again in the mud near the mighty Kishon. The Kishon is hardly more than we should call a "creek" at home, but here it is a river. Soon we strike the highway from Nazareth and run rapidly the 11

miles into Haifa. Higgins drives into a narrow street in the building materials district to get boards. The front of the warehouse is already crowded with camels being loaded with wheat sacks. It is wonderful how easily and without collision these great beasts edge their way gently and plainly make allowance for the bales on the saddle sides. Trucks, donkeys, wagons, men carriers move through with their loads and the camel is the most silent and noiseless of all in the narrow ways. I notice some Druses - elderly men with keen intelligent faces bearing an air of breeding, pride and at the same time beneficence, - not arrogance but self-respect. One might pass for a real old aristocrat in a London club, fine regular full features; another is more

nearly the typical Druze with an alert fine countenance and a serene and open air. They are, says Higgins, the most independent of all the peoples in this region — Armenian, Palestinian, Syrian, Bedouin and Egyptian — tho the last is often a pretty good type. Now the French are trying to break them down — but it isn't likely that they will succeed. Let us hope not. The Druzes wear a pure white band on the fez. — This country side is full of Russian Jews. They have a distinctive facial cut, which when one has seized upon its type, you need not mistake afterwards. As we travel homewards with our heavy load of building material we are soon mired again. We leave half the load and go on, still miring at times, but working through.

We reach Megiddo and start back for the other half of the load and the Arab we have left to guard it. These nightrides are interesting. Such a lot of Arabs as we meet traveling in the night, for we do not get back to Megiddo until 11 o'clock. I also see a jackal — a stocky animal running through the light of our buick. He is quite a little like a coyote on a small scale but stockier; and his cry is a sharp high one, trailing off into a dog-like yelp. As we came along by Carmel at sunset a camel train had turned off into the open fields by the roadside and the camels are grazing quietly; while each Arab is on the ground, kneeling, his face towards Mecca, occasionally prostrating, and reciting his prayers. Higgins

comments on the burned up appearance of this country in October, practically not a sign of vegetation, as compared with the present luxuriant vegetation. What do the herds for feed in summer? Apparently no hay is made. And Dr. Fisher says the hills are burnt off late in the year? Why, I wonder?

Collecting Specimens. - It is important to spread out the leaves in a natural manner. They are highly important organs of the plant and are often described inadequately because specimens are dried in a wilted bunch. It is absurd to say that leaves are not of generic importance. They are. And in certain cases we know the leaf characters has been transmitted unchanged for long periods. Some cases in paleontology point [Cont. p. 345]

- D.F. Higgins and I went to Mt. Carmel today to botanize. It is a beautiful day, a wonderful calm sunny day with great white clouds floating lazily. We drive up the mountain by an old wagon road at the east end. It is a very rough much disused road but we manage to get to the top to the Monastery of the Place of Sacrifice (See p. 232, Baedeker). The botanizing from the top is splendid. The upper part of the mountain is to a great degree wild brush land and we run into new plants (previously uncollected by us) repeatedly and get a whole of interesting things.

The view from the top east towards the Jordan is wonderful. The plain of Jesreel, the hills of Galilee, the view southwards to Megiddo - all is spread out like a map. One can see straight through the gap to Bethshean

and the Jordan to the mountains of Gilead beyond. Tabor lifts very high above the intervening hills. The eye traces some distance the white road to Nazareth. And far to the right, beyond a high montane ridge rises the snowy summit of the Antilebanon, the south part of it, that is Mt. Hermon. The air is clear and by afternoon even the lazy clouds are gone. I steal some few moments from collecting to gaze over the wide sweep of this historic field.

We have our lunch near at El Mahrakah the Branch Monastery of Carmelites on the summit. A German from the German colony at Bethlehem — has come up here by spring-wagon and two horses to spend the day and lunch, bringing his wife and one other woman with him. He speaks

excellent English. Higgins remarks that Thutmosis III (circa 1350 B.C.) was a fight against the Syrians on the field of Armageddon; ordering his soldiers not to stop to loot Megiddo but pursue the enemy; but the soldiers were lured by the loot with the result that Thutmosis was obliged to reduce the place by siege. So he cut down the forest trees about Megiddo for the purpose of building scaling scaffolds and so on in capturing Megiddo. Today there is not a tree about Megiddo. The excavators find wine and olive oil presses; but there are no vineyards nor olive orchards there today — no olive orchards nearer than Mt. Carmel in the northerly direction; less distant in the southerly direction. Herr Schmidt remarked that in 70 A.D. when Titus took Jerus-

Mt. Carmel, Palestine, cf. p. 350.

alem he cut down all the trees in the region. cf. p. 153.

The scrub or brush on Mt. Carmel consists of Styrax (no. 11,129), oaks (nos.), Laurus nobilis, Ruscus aculeatus, a member of the Anacardiales (no.

It is with a sigh of regret that I start down the mountain late in the afternoon, it has been so wonderful a day. The beauty and botanical interest of the vegetation is worth noting. I shall look back to this day on Mt. Carmel with a sense of elevation. It was delightful, refreshing and stimulating.

No. 11,133. Silene colorata Poir. var. longipes (Post) Dinsm. Cor. red.

No. 11,134. Silene damascena Boiss. et Gill. Petals white (when freshly opened, wedge-shaped with a notch which divides the petal into 2 strap-shaped rectangular segments.

No. 11,135. Crataegus Azarolus L. Cor. white. Small tree 8 to 10 ft. h.

No. 11,136. Galium judaicum Boiss. Margins of rock boulders.

No. 11,137. Galium articulatum (L.) Roem. & Schult. Margins of boulders

No. 11,138 Tragopogon glaber Hill. Rays 5, lavender, radiating symmetrically over the spreading lanceolate bracts in such a way as to a design that is highly pleasing.

No. 11,139. Compositae

south

Mt. Carmel, Palestine.

cf. p. 350 for ha:

Corolla yellow.

No. 11,140. Euphorbia Helioscopia L. very common on the rocky open slopes.

No. 11,141. Medicago denticulata or near it. (M. hispida Gaertn.)

No. 11,142. Galium or Asperula Cor. blue.

No. 11,143. Allium subhirsutum L. Crevices of rocks! Cor. white.

No. 11,144. Anemone sp.

No. 11,145. Thrincia tuberosa (L.) (Leontodon t. L.) Cichoriad. Lam. + DC.

No. 11,146. Calendula aegyptica L. Flo. yellow.

No. 11,147. Chaerophyllum trichospermum Pink flo. Umbellifer.

No. 11,148. Linum pubescens Pass.

No. 11,149. Medicago hispida var. apiculatta (Willd.) Urb. (M. apiculata Willd.)

No. 11,150. Medicago orbicularis Bartol.

No. 11,151. Medicago ciliaris (L.) Krock.

No. 11,152. Medicago rugosa Des

No. 11,153. Medicago coronata (L.) Desr. Leguminous

No. 11,154. Cancalis bifrons (Pomel)? maior. (Near Torilis.)

No. 11,155. Medicago tuberculata Willd.

No. 11,156. Medicago

No. 11,157. Cancalis tenella Umbellifer.

No. 11,158. Koeleria phleoides (Vill.) Pers. Grass.

No. 11,159. Scleropoa procumbens (Curt.) Boiss. Grass.

Mt. Carmel, Palestine

cf. p. 350 for loc.

No. 11,160. Arrhenatherum Kotschyi Boiss.
Grass. Bulb-bearing.

No. 11,161. Hordeum bulbosum L.
Grass with rootstock.

No. 11,162. Bromus scoparius L.
Grass

No. 11,163. (Composite) Cynocrambe
no. on sheet changed from 11,162. Cichoriad.

No. 11,164. Koeleria phleoides
Grass.

No. 11,165. Anagallis caerulea

No. 11,166. Medicago

No. 11,167. Erodium
(Nos. 11,167 to 11,215 = summit Mt. Carmel).

No. 11,168. Trifolium purpureum
coccifera L.

No. 11,169. Quercus (ilex)
Scrub 8 to 12 ft. h.

No. 11,170. Pistacia terebinthus L. var.
♂ Stamens 5; calyx 0.

Apr. 11, 1926.

Summit.

Bush 6 to 10 ft. h.

No. 11,171. (Anacardiaceae)
Ovary with 3 broad stigmas.
Apparently a perianth of some sort, but segments not equal. Segments seem to be 5, with a similar organ in the position of a bract.

No. 11,172. Trifolium clypeatum L.

No. 11,173. Trifolium erubescens Fenzl.

No. 11,174. Hymenocarpus circinnatus (L.) Savi.
Stamens 9 and 1; the 9 with filaments free about 1/2 way down! Corolla yellow; banner orbicular, obtuse. Calyx deeply cleft into narrow lanceolate segments, hairy. Terminal leaflet very large! entire!

No. 11,175. Convolvulus summit; pentapetaloides

Corolla blue, campanulate, shallowly 5-lobed, a lanceolate hairy area on the back of each lobe, or rather running from the tip of the lobe to the base of the throat (summit of tube). Stamens 5; filaments dilated downward. Sepals 5, distinct, imbricated, submembranous. Style very short; stigmas 2. Ovary 2-celled; 2 ovules in each cell.

No. 11,176. Scorpiurus sulcata L.

Cor. yellow. Legume elongated, strongly short-spiny, breaking into joints when mature, undoubtedly, because now showing distinct constrictions.

No. 11,177. Euphorbia

Low bush, woody only

at base.

No. 11,178. Briza maxima L.

No. 11,178a. Plantago cretica L. Grass.

No. 11,179.

Stamens 5; no calyx nor corolla. ♂ Shrub 6 to 9 ft. h.

No. 11,180. Medicago rotata Boiss.

No. 11,181. Koeleria phleoides (Vill.) Pers. ssp. berythaea (Boiss. et Bl.) Domin. Grass.

No. 11,182 Ajuga chia (Poir.) Schreb.

Corolla yellow. Lower lip much extended; upper lip obsolete Cf. no. above, same sp.

No. 11,183. Calytome villosa (Poir.) Link.

Stamens 10, forming a tube, homomorphous; free portion of filaments short. Wings with short claws. Corolla bright golden yellow.

No. 11,184. Quercus coccifera L.

This may be (O. ilex

but is narrow-leaved and cordate-based-leaved. 6 to 10 ft. h.

No. 11,185. Cistus salviifolius L. Cor. white, som turning lavender? At least we get lavender corollas. Under protection of other shrubs.

No. 11,186. Trifolium clypeatum L. Flowers white; common.

No. 11,187. Medicago hispida Gaertn.

No. 11,188. Medicago coronata (L.) Desr. Same as 11,176. no

No. 11,189. Ricotia lunaria (L.) DC. Cor. pink. Cruciferæ.

No. 11,190. Iris sisyrinchium Per. Blue.

No. 11,191. Crepis pulchra? Flowers yellow. Cichor.

No 11,192. Fls. yellow. Cichoriad. Perhaps same as 11,145? Root a cluster of slender-fusiform tubers.

No. 11,193. Labiate. Calyx cleft half-way into 5 ovate spinulose-tipped lobes. Calyx broadly turbinate. Corolla white, 2 cm. long. Stamens 4, the filaments flattened, hairy on margin, especially the upper pair. Upper lip cor. erect, slightly but distinctly notched. Lower lip 3-lobed, the middle larger. Palate concave or forming a hollow, where passing into middle lobe forming a palatal fold or furrow. Style shortly and equally 2-cleft. Woody below. 2 to 3 ft. h. Corolla tube with a ring of hairs.

No. 11,194. Pistacia lentiscus L. Per. white. Fils. dilated downward.

No. 11,195. ← Mastick.

ovary with 3 styles; stigmas large, one to each style. Per. apparently none. No! = calyx of about 4 sepals

No. 11,196. Carduus argentatus L. Flowers purple. Cynareae – Thistle tribe.

No. 11,197. Campanula sp. Anthers 7 mm. long on short (1/2 mm.) filaments; these filaments, however, borne on a dilated base which is quadrangular, white, puberulent on margin. Anthers dull white. Style blue, cleft 1/3 way down. Cor. 21 mm. long

No. 11,198. Galium Cor. yellowish-green. Stems woody below.

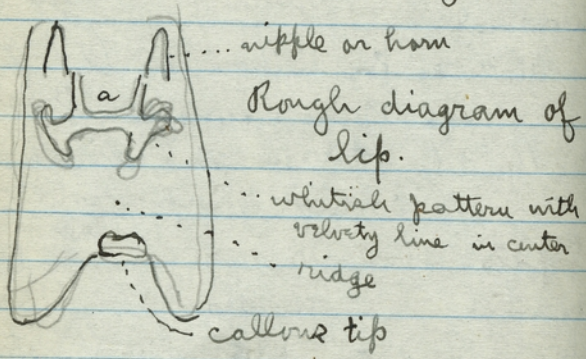
No. 11,199. Compositae (discard)

This cichoriad had canary yellow fls. I secured only a single individual.

No. 11,200. Poa bulbosa L. (discard) 200a Briza maxima L. Grass.

No. 11,201. Ophrys sp. discard Orchid. Calyx white dull. Sepals about 10 mm. long, ovate. Anthers in a hooded arch above the somewhat phalloid-shaped protruding stigma. Petals apparently none. Lip a somewhat quadrangular structure when spread out, somewhat notched at the broad truncatish apex and bearing a callous upturned greenish appendage about 2 mm. broad and 1 mm. long in the notch. Lip convex, the sides turned downward, bearing near the base one erect horn on each side. Lip brownish, puberulent densely. Sepals glabrous. The

lip spreads horizontally.



upper sepal slightly greenish-nerved.

Petals reduced to brownish scales 1 mm. long? These structures are in pair and are set behind another column in the position of petals.

"a" = glabrous quadrate spot! marked by the design. Column with a dark spot on each side for an "eye" and an curved beak for probascis, thus resembling an insect. This

plant comes nearest Ophrys arachnites but the petals are too small (as also for all other species in Part), nor is the margin folded back in O. aracknites, as here in the lip of this spec. As to O. tenthredinifera, there is no cluster of hairs at base of lip Tooth.

Cont. from p. 328.

to this. It is amazing to see the poor scraps that Gray and Watson used in preparing the Botany of California. Their genius was an offset. But if they had had Eschscholtzia californica with proper roots to the specimens they never would have described it as "annual".

No. 11,202. Geranium purpureum Vill. Cor. pink. In bush.

No. 11,203. Laurus nobilis L. 6 to 9 ft. h.

Summit
No. 11,204. Quercus Syriaca Hy.
Q. lusitanica var.s. A.DC. 8 to 13 ft. h.

No. 11,205. Quercus infectoria Oliv. Syriaca Hy.
(Q. lusitanica Lam.) 6 to 10 ft. h.

No. 11,206. Mercurialis annua L.
In brush land. Cont. p. 34

Ranunculus asiaticus L.,
No. 11,207. ~~Anemone~~

No. 11,208. Alopecurus
Grass.

No. 11,209. M. scutellata Mill.
Medicago.

No. 11,210. Medicago rugosa Desr.

No. 11,211. Alsine discandi
Brush land.

No. 11,212. Valerianella truncata Rchb.
Brush land.

No. 11,213. Trigonella Foenum-graecum L.
Leguminosae

No. 11,214. Hymenocarpus circinnatus (L.) Savi,
Leguminosae.

No. 11,215. Vicia lutea L.
Leguminosae. Corolla yellow. Banner very large for the size of the wings and keel, with a small but distinct notch at apex. (nos. 11,167 to 11,215 coll. on summit of Mt. Carmel not far from monastery)

No. 11,216. Silene dichotoma Ehrh.
Petals white. cf. p. 350

No. 11,217. Onosma syriacum Labill.
Corolla tube 14 mm. long, its lobes triangular-lanceolate, primly and closely reflexed along the tube. Anthers 5 mm. long, the fertile portion tipped by a subulate structure as long as the fertile part. Anthers 2/3 exserted. Cor. blue. Calyx-lobes lanceolate, attenuate, obtuse at very tip. Boraginaceae. Corolla-tube cylindric, truncate at mouth

cf. p. 350

or appearing so on account of the evenly and regularly reflexed lobes. Low rounded bush, woody at base.

No. 11, 218. Hyoseris Scabra L. Cichoriad.

No. 11, 219. Vailantia hispida L.
11, 219a (Prasium) Rocky places.

No. 11, 220. Urospermum picroides Cichoriad. Rocky places.
One plant from the summit; one plant (the more mature) from half way down.

No. 11, 221. Geranium pusillum L. Cor. pink

No. 11, 222. Trifolium stellatum L.
11, 223 Umbilicus intermedius Boiss. (Crassulaceae)

No. 11, 223a Vailantia hispida L. Rubiaceae ~~Crassulaceae~~

No. 11, 224. Caucalis leptophylla Umbellifer

No. 11, 225. Koeleria phleoides Grass

Cont. 11, 206. ♀ fl. Ovary 2-celled, 2-ovules to ovary; Styles 2; sepals 3, distinct. Fruit geminate. Sepals accrescent, round-ovate. Fruit bristly down the back of each lobe. Styles laciniate-fringed.
↑not quite

♂ fls.? In the crowded axils are 2 other kinds of fls., presumably staminate: 1st sort: sterile ovary short, calyx 3 (or 4)-lobed, membranous, bearing a central sterile column denticulate at top and 2 slender white filaments (no anther, at least at this stage); 2nd sort: sterile ovary slender; long, stipe-like; calyx, sterile filaments and column as in first sort. Fruit-cell splitting open by 2 valves, that is dehiscing dorsally and "ventrally". — I now find the ♂ calyx so constantly 3-lobed that

This must be taken as the normal number. The reason I don't find stamens with anthers is probably due to the age of the individuals. The structure which I have called staminat are found in the same axils with ♀ fls. I do find quite young ♀ fls. in upper axils.

[Nos. 11,216 – 11,225, 11,133 – 11,166, collected on lower slopes 1/4 way up from Plain of Esdraelon.]

– Peasants. I have never seen such willing workers as these fellahin. They go on a jump or run very frequently and are rarely slow. Higgins says, as do so many others, that in most respects they are like children. They have, from our standpoint, no sense of moral responsibility. A chaffeur will allow his friend to drive the car you have entrusted to him and it will be ruined in a few minutes. They

have no concept of "upkeep", of taking care of machinery. "This, they think, is a wonderful thing which Allah has caused the foreigner to provide for us. Let us use it." Here at Megiddo we are in a Moslem stronghold extending south to Nablus. In all that region there are only a few wagons – possibly 2 or 3. Even as to a spring wagon they have no idea of upkeep. They are intensely conservative and as long as the period of Hebrew domination, the Jews found them a refractory people and difficult to deal with. They cut a 2-foot piece out of a coil of wire instead of finding the end and taking it off the end. There are few real roads – and that is where the camel shines. He doesn't need a road to transport heavy loads.

– Mt. Carmel is a wonderful botanizing ground. We continually find new things every time we change our station a few hundred yards. On the lower slopes of the mountain we see a lovely young wheat field. The wheat stands 1½ ft. h., and is free of "weeds"; but all through it are the lovely pink spikes of Gladiolus segetum (no. 11,100). It makes a charming scene.

– Wild life at Megiddo: Jackals, Hyenas. Gazelles, Foxes. On the Tell Higgins and I scared up a brace of partridges. Lizards. Any quantity of little creatures – moths, small insects, beetles, spiders and so on. Today, Apr. 11, I saw a blue carnivorous bird, perhaps a kestrel, about 1½ times the size of a sparrow – Hawk at home.

See p. 360, fire-flies: & p. 352.

No. 11,226. Aristolochia parviflora Pers. 3 cm. long, exceedingly oblique, the lower "lip" as long as tube (upper "lip" none), deflexed upward at right angles (or a little more) to tube, so as to cover mouth of tube. Perianth dull reddish brown. – Crevices of rocks, Megiddo. Higgins discovered this.

No. 11,227. Medicago orbicularis Bartal.

No. 11,228 Phalaris canariensis L. Grass.

No. 11,229. Juncus bufonius L. Fields. Low wet places.

No. 11,230. Chrysanthemum coronarium L. This is the most abundant flowering thing at Megiddo. Over the plain of Esdraelon it forms great lakes of color and it makes golden slopes on

the hills of Galilee that can be seen from here 8 or 10 miles across the plain.

– Flower color at Megiddo. The Corn Poppy makes patches of color everywhere in the wheat. It is too dark a color to be seen at great distance*, whereas the no. 11,230 catches the sun (q.v.). Higgins and I went down into the wheat field on the plain in front of the Tell this afternoon. There are rock outcrops here and there and masses of Sedum (no. 11,234) are here. In the wheat, now 3 ft. high, the lovely blue-purple Campanula is abundant, forming a low understory and ornamenting the earth in a lovely way (cf. no. 11,238). (Cf. p. 356, no. 11,239.) Cf. p. 360, 324, 356, 372.

* noticeable up to 1/4 mile

No. 11,231. Picris Kotschyi Boiss.
Rock outcrops. Cichoriad.

No. 11,232. Rhagadiolus stellatus (L.) Willd. var. edulis (Gaertn.) DC. Cichoriad.

No. 11,233. Lamarckia aurea (L.) Moench. Grass.

No. 11,234.
Crassulaceous. Stamens 10, anthers black. Bor. whitish.

No. 11,235. Ranunculus trachycarpus var. Guillelmi-Jordan Asch.
Cor. – yellow. Wet fields.

No. 11,236. Orobanche lavandulacea
Cor. blue; 3 lobes lower lip equal, spreading, beneath the sinus (or in a way filling it) a heavy white fold, making 2 strong ridges on palate and running down into throat stigmas orbicular; anthers slightly woolly. Filaments and style glabrous. All lobes crenulate. Wheat fields. Upper lobe with 2 short-ovate cents somewhat diverging lobes.

No. 11,237. Hordeum bulbosum L. Bulbous. Grass.

No. 11,238. Campanula Specularia Speculum-Veneris (L.) Tanf. Cf. p. 360. Cor. purple blue. cf. p. 354, 372.

No. 11,239. Tordylium aegyptiacum Lam. Umbellifer.

This is very abundant. Its marginal flowers are enlarged and very conspicuous. The showiness of the umbels adds a delicate touch of old lace to the wild gardens where abound the Corn Poppy, the large-fl'd Erodium and Scabiosa. It has a central disk of (white) purple-fleshy, compact.

– Collecting Spms. – It is always wise to take along from home one's essential supplies. The scarcity of paper – even newspapers – is remarked supra p. 272. At Ramallah Mr. Jones, the head-master of the Boys School, kindly gave me a stock of newspapers, remarking that they were sufficiently dry to use in making specimens. I supposed he was punning on their dry reading matter. When

I got into the field I found that they were "anti-wet" papers, that is prohibition newspapers from the U.S!

Specimens should be made with especial care for scientific collections, because specimens are or should be regarded as public property – as the common property of all scientists. This statement of principle is especially applicable to all specimens distributed in sets, or which have been quoted in print, or which are the types of new forms, or which formed the basis of scientific drawings. All such material should be free of access to all competent workers. It should be freely loaned with some possible exceptions. It should never be locked up nor subject to discriminating rules or unfair or personal preferences. Sometimes an attempt is made by collectors to establish a species of property or scientific rights over distributed specimens; that

is if such specimen is discovered to be new & the collector claims the right of sovereignty and of giving permission for its publication. Such claims are purely specious, not to say presumptous and impertinent*. Cf. p. 370

* For a case of this kind see Jepson Correspondence, vol. , p .

even tho' having nothing to do with its discovery as a new species.

No. 11,240. Ophrys. galilaea H. Fleischmann at Bornm.

Petals green, about ½ as long as upper sepal. Lip with a pattern of yellow and velvety purple from base to apex. Apex notched, bearing in notch a short broad callous which is slightly notched. Lip with 2 lateral lobes, these cone-shaped, densely velvety-pubescent, oblique below, attached to the side of the lip just below

apex of cone, so that cone projects upward a bit above lip level.

- The Japanese are, everywhere, working for their country, sending home maps, plans, trade formulas, manufacturing secrets, etc. So with the British: when he sees any information that is useful to Britain, he sends it to his government.

No. 11,241. Silene aegyptiaca L.f. var. umbrosa Hal. Petals white; limb rotate*, cleft nearly to base into 2 linear segments. Segments obtuse, entire, spreading so as to form a V. Caps 2, ovoid, oblong. Styles 3. Filaments hairy on included portion, glabrous on exserted portion. Cont. p. 361.

* Reflexed to 45° below horizontal.

Campanula (no. 11,238) Speculaire
This is everywhere in the wheat fields. The color is really lavender-purple and not blue. Today I saw a grain field, the green wheat 1 foot high, with Campanula and the yellow disks of Bupleurum perfoliatum. It was pleasant to pause and enjoy such happy color combinations. Cont. p. 361.

- Higgins and I went down into the grain field in the sheer darkness last night to recover a Dutchman's Pipe plant left at the flat rock. (no. 11,226). On our way back the fairy lanterns of the night (fire-flies) were darting and landed against me and ornamented my coat with points of fire. Our way was through the high wheat with marshy spots here and there.

filled Life at Megiddo. - Today I find a beautiful green lizard that lives in the high grass. He clambered from one stem and leaf to another, keeping quite off the ground.

The blue hawk (cf. supra 352) here at Megiddo I see again today. He is, I think, scarcely larger than our Sparrow Hawk at home, and plays in the wind much the same way, though not fluttering steadily at one point so far as I have noticed; but he can drop sidewise with extended wings and do similar stunts.

- Cont. no. 11,241. Flowers opening towards sundown, remaining open until next morning, visited at night by moths that suck the pendulous flowers.

W. F. Higgins: "The student is, at Univ. Chicago, taught he is a selected being, a superior product, that he is a lot better than anybody else. This has been carried so far that the Leopold-Loeb murder was the direct result of this cultivated super-superiority."

no. 11,242. Koeleria phleoides (Vill.) Pers. Grass.

no. 11,243. Trigonella libicina Boiss. Leguminos. Flo. pale lavender.

No. 11,244. Umbellifer.

No. 11,245 Umbellif.

No. 11,246 Medicago apiculata Willd. Legum.

No. 11,247. Silene palaestina Boiss. Flo. deep pink.

No. 11,248. Scabiosa prolifera L. Flo. cream-white. Abundant in edges of fields

No. 11,249. Veronica polita Fries. Cor. small, pale blue.

No. 11,250. Alsine tenuifolia (L.) Crantz. var. genuina Boiss. (Arenaria tenuifolia L.)

No. 11,251. Medicago coronata (L.) Desr. Procumbent stems. Leguminous.

No. 11,252. Coronilla cretica L.

Cor. yellow. Calyx: upper lip cleft about 1/3 into acute lobes; lateral teeth subulate, spine-tipped, the spine hooked. Lower tooth similar to lateral. Stamens 9 and 1; filaments free nearly 1/3.

No. 11,253. Neslia apiculata Fisch., Mey., & Avé-Lall. Grain field.

No. 11,254. Filago germanica (L.) Huds. Dry ground, edge fields. Ally of Filago.

No. 11,255. Linaria triphylla (L.) Mill. Cor. white with yellow palate; spur lavender-tinted, long, slender, curved, upper lip cleft 1/3, the sides folded back to back. Lower lip with 3 short lobes. Palate very convex, creased or channeled down middle. Throat on side lower lip densely hairy. Annual.

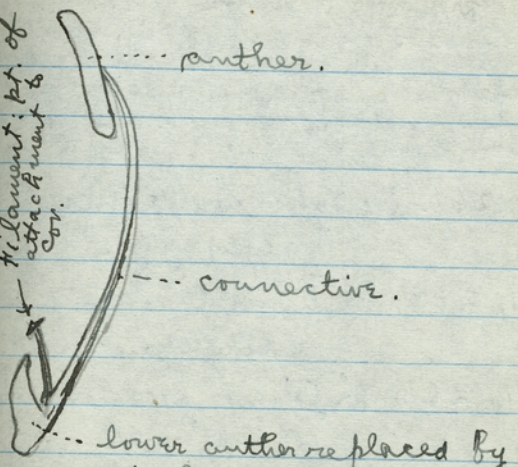
No. 11,256. Poterium gaillardoti Boiss. (Sanguisorba) Rocky outcrop. Rosaceous.

No. 11,257. Orobanche nana Noe? Upper lip short,

barely notched. Lower lip: 3 lobes subequal, concave-undulate. All the lobes short, all crenulate. Anthers spinulose-tipped, or better cuspidate. Cor. white. Plant whitish with pink tinge. Stigmas subglobose at enlarged tip of style.

"No. 11,258. Plantago lagopus L. Dry ground.

"No. 11,259. Salvia Horminum L. Bor. purplish, the lower lip light blue. Upper lip galeate, flattened sidewise. Lower lip concave or bowl-shaped with small lateral lobes. Galea a little hairy on back. Spikes with coispicuous sterile purple bracts at summit, these dark purple. This species is common everywhere or at least widely scattered in this district.



No. 11,260. Allium schubertii Zucc. Perianth pink-lavender, the segments lanceolate-acuminate. Filaments dilated downward, pink-lavender. Ovary greenish, densely papillate, strongly 3-lobed, each lobe strongly creased down the back. Bulb very large. Leaves Tumbra-

Megiddo, Palestine (nos. 11,260 & 11,273 at village abu Shusheh)

like, spreading over the ground. Spm. taken less stout and 8 in. shorth than another specimen too bulky to handle as a spm. Filaments pink-lavender; anthers yellow. Stem up to 2 cm. diam. Pedicels about 225, up to 9 cm. long.

No. 11, 261. Dactylis hispanica Roth.
Rocky ledge. Grass.

No. 11, 262. Psilurus Cristatus
Rocky ledge. Hair Grass

No. 11, 263. Trifolium procumbens L.
Corolla yellow. Legum.

No. 11, 264. Hedysarum pallens
(H. (Morris) Halacs. Sibth. et Sm.) Legum.
Cor. pink. Rocky ledge in good soil.

No. 11, 265. Chrysanthemum
Prob. C. segetum.

Fields.

No. 11, 266. Ranunculus arvensis var. spinosus Neits.
Wet spots in Fields

No. 11, 267. Silene cucubalus Wib.
(Silene inflata L.)

No. 11. 268. Scilla hyacinthoides L.
Flowers and pedicels lavender-purple, raceme axis infl. Ovary 3-lobed, creased down the middle of each lobe a little, filaments dilated downward, rather strongly toward base. Grain fields. The bulb bears bulblets laterally which give rise to new sets of leaves. One of these, well grown, is shown in spm.

No. 11, 269. Bellardia Trixago
apparently. Cor. white, turning pink. Lower lip very broad and roundish, the middle lobe smaller than the lateral, the palate with convex inflations. Upper lip galeate, erect, acute. Upper pair of stamens with a heavy tuft of hairs; lower pair longer, anthers pubescent. Style pubescent. Filaments dilated, broadest below the middle. Ovary hairy, Corolla a little hairy outside. Gravelly field.

No. 11, 270 ~~Muscari botryoides~~ Muscari (discard)

Cont.

Corolla whitish, purple-based.
No. 11.271. Ononis breviflora DC.
Legume; unifoliolate.
No. 11, 272. Ranunculus (Batrachium) trichophyllus Chaix. Covering pools in the streams with sheets of white
No. 11, 273. (sheet not numbered)
Periwinkle prof.
Stems erect, simple, from underground rootstocks. Just coming into flower; only one individual with fl.
— Oleanders along stream; not in fl.
— Running in the car towards Mt. Carmel today Higgins noticed that many stones have been thrown into the road by the fellahin, he believes maliciously. His laborers get out of the car and toss them out. Now, neither the peasant, nor these road clearers place the stones in the strip between road and field. The peasant wants the stones out of

his field and he gives them a toss into the road; the road clearer, a fellah, throws them back into the field. The native I suspect abhors all these innovations that come with the white man, paved roads and all that. He doesn't need a paved road for his means of transport. He still uses a sickle to cut grass or grain, not even a scythe. I have seen only one mold-board plow in all Palestine; only one windmill and that brought in by a native who had lived in America.

Today I met a native, an old man, on the trail or footpath. I greeted him in Arabic; he returned my greeting, took my hand, kissed it twice and raised it reverently to his forehead.

wild life.— Tree at evening at next village north filled with cranes!* I see a green lizard. It lives in the grass, wheat and chrysanthemum branches, proceeding across country but not touching the ground. His body is so like the color of the vegetation that he is indistinguishable unless you follow him closely. cf. p. 352.

This great amount of wild life is due at least in part to the fact that the natives do not use firearms: 1. not for sporting 2. their firearms are very few. If they kill, they kill for food and not for the sake of killing as do our people at home. A boy with a gun will bring down a sparrow hawk poised in air just to kill, in California.

* Ciconia alba (White Stork) = migrating north! See p. 271, 420

- D. F. Higgins, the engineer here, has had quite a career. 1910-12. Missionary teacher, M.E. Church South, in Korea. 1912, worked for a mining co. in Korea.

1913-1916. with British Oil firm in China (S. Pearson and Son, Ltd). Whitehall Petroleum Corp. 1917, exploring for oil in England, same firm. 1919, summer, Spitzbergen, Northern Exploration Co. 1919, winter, Sinai oil exploration, S. Pearson & Son, Ltd. Mar. 1918-May 1919 — British army, 2nd lieutenant and acting capt. Has traveled a good deal; went from Peking to London and London to Tokio, 20000 miles in 3 mos. Instructor in Geol., Univ. Chicago.
- Sigma Xi. Geol. Soc. London. Fellow.
Am Institute Mining and Metallurgical Engineers
Fellow Geol. Soc. of America.
Institute of Petroleum Geologists.

No. 11,274. Melilotus alba Desr.

No. 11, 275. Convolvulus

Stems trailing over ground few from the root-crown. Cor. white, large. Grain fields

No. 11, 276. Trifolium purpureum Loisels

Heads cylindric, elongated

Mson

No. 11, 277. Alopecurus myosuroides Huds. (A. agrestis L.) Grass. [not A. pratensis L. 1753]

– collecting Spms. – Foreign material should be separated carefully from the specimens preserved. Such material is often contaminating in various ways, imparts false characteristics and sometimes misles the botanists who work on it. Glandular plants are especially liable.

No. 11,278. Adonis vernalis ?

Crimson cor, Grain fields

No. 11,279. ~~Carthamus~~ Scolymus maculatus L.

This thistle makes a branching bush 2 ft. high. It is "tremendously spiny", a vicious beast, as was discovered in taking a specimen. Grain field.

No. 11, 280. Scorpiurus muricatus L.

Leguminosæ.

Grain field. Corolla yellow.

No. 11, 281. Coronilla scorpioides (L.) Koch

Cor. pale yellow. Leguminosæ. Leaf unifoliolate with large (rather) stipules, at least they are foliaceous.

No. 11, 282. Euphorbia helioscopia L. This grows in the fields near El Ful and covers several hundred acres so thickly as to color the landscape a pale yellow. This yellow can

be seen from Tell Megiddo some eight miles away.

No. 11,283. Lavatera trimestris L. Corolla 4 cm. long. Malvoid. Cor. a beautiful luminous pink-crimson.

No. 11,284. Eleocharis palustris(L) R. Br. Swamp.

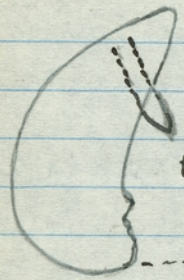
No. 11,285. Carex divisa Huds. Swamp.

No. 11,286. Scirpus maritimus L. Swamp.

No. 11,287. Acacia farnesiana Hedge plant.

No. 11,288. (Lathyrus) Vicia sp. Cor. white. Stems long, climbing in hedges to 3 or 4 ft.; prob. perennial but impracticable to trace down to the root. — The great pools of color on the plain of Esdraelon are Chrysanthemum (same as no. 11,265). cf. p. 354. One of the most charming of all sights is the lavender-purple Campanula (no. 11,238) in the wheat.

No. 11,289. Alcea (Althaea) acaulis Cav. Malvaceous. Cor. white, 3.6 cm. long. Involucre 8-lobed, 7-lobed, 7-lobed, 6-lobed, 6-lobed, 8-lobed. Six counts made. Petals obovate, deeply notched, densely ciliate-fringed on the margins at base (for 2 mm.) Petals with a faint flare of lavender liner at base. Stamen-column anther-bearing to apex. Cells of ovary not divided. Style branches filiform, stigmatose along inner face. Plant with few very short decumbent stems and very long-petioled leaves. Post-key to the genera calls for a divided carpellary cell. See next p.



The appendage referred to above is drawn correctly or nearly so. Post describes it as an "inward projection of the pericarp". It is in any event a structure pointing downward a little more, if anything, than represented in my diagram. It is a quite free structure except as attached to the back of the carpel. — Megiddo.

No. 11,290.

Legum. Plain of Esdraelon

Cont. no. 11,260. Allium.
Ovules 4 in each cell, in pairs side by side. Stamens 1½ times as long as perianth-segments. Leaves 9 cm. broad, spreading over the ground. Pedicels as much as 6½ inches long. The plants near El Ful have only 2 leaves as far as I notice. This plant agrees fairly well with Post's description. Leaves very much broader than indicated in Post (5 to 9 cm. broad). Filaments as described by Post, but much dilated toward base. — Gumbo flats.

- The fleas are very bad at Megiddo. My pyjamas and underclothes are badly blood-spotted. I seldom feel them biting — but if I feel them crawling then they are doomed because I apply the water treatment. They always jump towards water. Keatings Powder eliminates them from the bed. The native houses are full of them all the time.

- I have never noticed a shepherd using a dog with sheep in all Palestine.

Megiddo, Palestine (nos 11, 291 to 11, 319 near Abu Shushah)

No. 11, 291. Koeleria phleoides (Vill.) Pers. dry flats. Grass

No. 11, 292. Schlerochloa dura (L.) Beauv. Tufted grass. Dry flats.

No. 11, 293. Poa persica Trin. var. diaphora (Trin.) A. & Gr. Grass, shallow water.

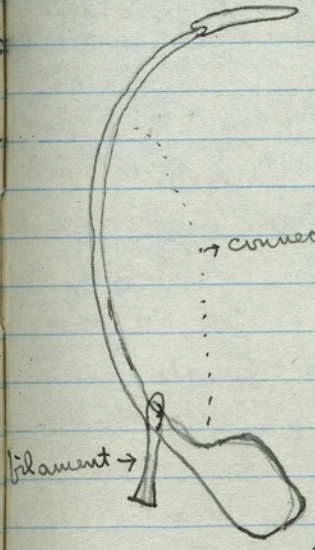
No. 11, 294. Saponaria vaccaria L. Cor. pale pink. Grain field.

No. 11, 295. Arrhenatherum Kotschyi Boiss. Grass. Good soil between rocky outcrops in grain field.

No. 11, 296. Salvia spinosa L. 3 ft. H. Middle lobe lower lip rounded, concave or somewhat shallowly bowl-shaped. Lateral lobes of lower lip extended horizontally * as slender processes 4 mm. long. Upper lip somewhat falcately curved, especially on the back. Corolla

* that is, prolonged in direction of tube.

reddish pink, 2.5 cm. long.



Tip of filament a little dilated and prolonged a little beyond insertion on connective.

Stamens and style glabrous.

No. 11,297 Koeleria phleoides (Vill.) Pers.
Rocky ledge ~ Grass.

No. 11,298. Cynosurus echinatus L.
in grain field. With 11,297.

No. 11,299. Prasium majus L.
Labiatoid. Cor. white. Middle lobe lower lip the larger and longer. Stamens 4, the lower pair slightly longer; filaments dilated, the edges puberulent or ciliate. Palate lower lip a little hairy. Middle lobe with 2 ridges below apex. Upper lip erect, concave from front and showing anther pairs. Bush 2½ ft. h. Rocky ledge, hillside grain field. Short-lobes of style about equal. Calyx accrescent, open or bowl-shaped and showing the fleshy achenes or fruits. Calyx herbaceous in fruit and subrotate rather than bowl-

shaped as said above. Evidently browsed heavily by cattle. cf. 11,193.

No. 11,300. Parietaria alsinifolia Del.
Urticoid. Rock-crevice.

No. 11,301. Trifolium lappaceum L.
Legum. With 11,297.

No. 11,302. Psilurus incurvus (Gou.) Schinz et Thell.
Grass. With 11,297.

No. 11,303. Stipa parviflora Desf.
Hair Grass. With 11,297.

No. 11,304. Andropogon hirtus L.
Grass. With 11,297.

No. 11,305.
Composite. With 11,297.

No. 11,306. Andrachne telephioides L.
Stamens 5. Style 1, short; stigmas 1. Petals 5, cuneate, white, notched at apex, their base opposite a divaricately forked gland; these glands alternate with the roundish sepals. Flower rotate, or better subrotate. Perennial.

Styles 6, distinct! stigmas capitate. [If there occurs a single style as noted above it must be in a sterile (♂) fl. The "style 1" was noted in the field.] Ovary 6-celled, one ovule in each cell. Flower apparently hypogynous. 2 counts of 6 cells in ovary.

No. 11,307. Trifolium spumosum L.

No. 11,308. Gaudinia fragilis (L.) Beauv. Grass.

No. 11,309. Onobrychis crista-galli L. Legume with spiny winged fruit.

11,309a Trifolium clypeata L.

No. 11,310. Trifolium globosum L. Legum.

No. 11,311. Ononis reclinata L. Corolla nearly white, a little pinkish. Legum.

No. 11,312. Hordeum spontaneum C. Koch Grass

No. 11,313. (Smilax) Tamus communis L.

No. 11,314. Anagyris foetida L.

Legum. Bush 7 fl. h., many stemmed. Flowers on old wood.

No. 11,315. Hordeum bulbosum L. Grass

No. 11,316. Lagoecia cuminoides L. Slender annual with nodding flower-clusters, the clusters resembling somewhat a grass inflorescence with fine whitish bristles or hairs. Ovary inferior, 1-celled, 1-ovuled. Sepals large for the fl., laciniately cut into setaceous or hair-like segments. Petals small, a small oblong base prolonged into 2 bristles. Sepals somewhat pinnately laciniately cut, that is with a short-bristly midrib, not palmately slashed to base, though the sepal is in outline somewhat palmate. Stamins 6, short. Style 1; stigma 1. Flowers greenish. Stamens alternate with petals! Cont. p. 393.

No. 11, 317. Trifolium scabrum L.
Legum. Stamens 9 + 1. Orng
2. Cor. white.

No. 11, 318.
Grass

No. 11, 319. Astragalus dorocerus Bge.
Legume with curved pods

[— One of the most wonderful pieces of coordination that I have ever observed is that between the lead or riding donkey and the camel train which follows it. The whole train moves along in perfect unison; there is no impossible dragging of the camels by the donkey, no over-running of the donkey by the fore camel.]

— Today I rode with the truck as far as the village of Abu Shusheh. Then I botanized on the gentle foothill slopes in the wheat fields, following the rocky

— Cont p. 399 —

— The Winds. — Here at Megiddo the wind begins to blow about ten o'clock, a little earlier or later day and blows strongly until near sundown. It is quiet all night and there is a lovely calm to the mornings. Sometimes the wind is very violent. Certainly botanizing in it, in the field, is very difficult every way. Stanley Fisher says the winds, so regular and monotonous, shaking doors and rattling windows and shrieking through openings, gets on his nerves. I was out in the great storm of wind and rain which struck Palestine, Feb. 18, 19, '20, traveling from Beyrouth to Jerusalem. It blew strongly behind us through the Plain of Jezreel, came in angry gusts in the Vale of Dothan and howled and roughed like a wild thing on the highlands of Judaea, in pauses dying away in sullen roars towards the mountains of Moab. At times it was like ten furies. Shepherds, naked legged, stood in the bitter cold in the drear mountains

nos 11,324 & 11,340 at (Z) Zalafeh

tending their sheep. Cf. description of a storm in Psalm 39:3-9. Cf. p. 418.

– Convolvulus arvensis, grain field, typical.

– Cichorium intybus

– A donkey with its Arab driver ambled into the court yard at Megiddo with a load of water this morning. Dr. Fisher and I watched the animal and its habits as it was unloaded and he commented: "The build of the ass, the facial features, all are the same as on the monuments. The ass has come along unchanged" The donkey represents the old time better than anything else nowadays.

No. 11,320. Scorpiurus sulcata L. Legume with contorted scabrous pods.

No. 11,321. Adonis sp.

No. 11,322. Helianthemum salicifolium (L.) Mill. In fruit.

No. 11,323. Galium judaicum Boiss.

No. 11,324. Andrachne telephioides L. Cont. p. 399. Same as 11,306.

No. 11,325. Hymenocarpos circinnatus (L.) Savi 11,325A = (Cimpos. with spiny? bracts)

No. 11,326. Tragopogon glaber Hill (Tragopogon hybridium L. Geropogon glaber L.)

No. 11,327. Filago germanica (L.) Huds. Near Filago

No. 11,328. Crepis senecioides Del. Habit of Hypochaeris.

No. 11,329. Chaetosciadium trichospermum L. Umbellifer.

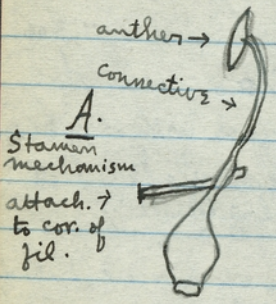
No. 11,330. Caucalis tenella Umbellifer.

No. 11,331. (Alcea) Althaea sp. Grainfield.

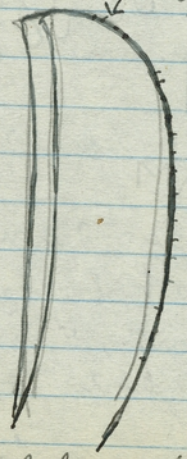
No. 11,332. Centaurea cyanus L. Fls. blue. Ray corollas tubular funnelform, 5 long lobes on inner side, 3 shorter or smaller. Grain fields.

No. 11,333. Bromus japonicum Thunb. Grass.

No. 11,334. Salvia syriaca L.



Corolla white. Upper lip erect, only slightly curved, subcompressed; cleft at apex, but not appearing so on account of the two sides being approximate



B.

Upper lip.

"A." & "B" not drawn to scale.

Lower lip: 3 lobes unequal; pa

ate inflated or prominent; Perennial herb. Grain fields. Calyx strongly 10-nerved with short bristles on the nerves. Calyx cleft 1/3, the lobes lanceolate, cuspidate.

middle lobe notched at apex; lateral lobes slend-convolute structures so as to appear like cylindric processes, these stand erect, i.e., that is in line of tube, while the middle lobe of lower lip is spreading.

No. 11,335. Allium schubertii

Leaves only. Pedicels circa 200. Gumbo flat, grainfield.

No. 11,336. Ornithogalum pyrenaicum L.

Liliaceous. Per. segs. white with a green band on back. Filaments petaloid-dilated, contracted at apex to a slender point bearing the anther. Grain fields.

No. 11,337. Cicer arietinum L.

Cor. lavender pink; banner roundish, veined, slightly notched at

apex. Wings purple. Calyx: cleft a little over half-way into lanceolate lobes; one lobe standing behind keel, the other 4 standing behind banner. Ovary densely hairy. Style glab. Stamens 9 and 1. Keel petals very broad.

No. 11,338. Stachys arabica Hornem.

Cor. 2.6 cm. long; upper lip erect, rather narrow, quite open. Lower lip spreading, the middle lobe broader than long, truncatish but not notched, nearly white or slightly pink-tinged, the lateral lobes small, in much same plane as middle lobe, pinkish like upper lip and tube. Stamens 4, the lower pair slightly longer; filaments dilated, with villous-ciliate mar-

gins, joined to anthers by a broad base. Tube hairy inside. Tube with a hairy ring inside, 3 mm. from base. Style very shortly 2-cleft. Upper lip shorter than lower. Calyx cleft-½ way into broadly lanceolate cuspidate lobes.

No. 11,339. Silene crassipes Fenz.

Petals crimson, broadly oblong, slightly but distinctly notched, 4 mm. long; crests 2, lanceolate, entire. Ovary stiped, the stipe 4 mm. long. Calyx-tube slender-cylindric, 10-nerved; lobes 1 mm. long membranous but for the green midnerve which ends in outer, obtuse. Grainfields.

No. 11,340. Catananche lutea L.

Pappus-bristles to disk-fls. 5, paleaceous-dilated at base and somewhat silvery, equal.

Rays with 5 similar bristles. Disk-achenes with 3, 4 and 5 bristles, but mostly 5 so far as counted. Flowers canary yellow. Bracts of involv. silvery-scarious. Grain-fields — but in a semi-swampy uncult. spot.

No. 11,341. Anchusa strigosa Labill. Borag. Cor. blue, commonly white. Hillslopes.

No. 11,342. Bromus erectus Huds. var. syriacus (Boiss. et Bl.) Boiss. Grass

No. 11,343. Ononis hirta Desf. var. glandulosa Bornm. Legum. Calyx cleft about 2/3 down, linear lanceolate; lower lobe longest, nearly equaling corolla; lateral lobes slightly unequal and slightly shorter than the 5th (lower) lobe; by lateral is meant that they (the 4 lobes) are in pairs in a lateral position. Corolla

pink; banner orbicular, distinctly notched, with a slight point or mucro in the notch.

No. 11,344. Crepis aspera L. Comp.

No. 11,345. Campanula hierosolymitana Boiss. Cor. blue, cleft 1/2 way, lobes elliptic, mucronate. Sepals ovate, shortly caudate. Style slender-clavate, woolly*-glandular, shortly 3-cleft. Anthers 7 mm. long, borne on a quadrangular scale, the scale at apex truncatish and with straight sides or nearly, villous-ciliate. Grain fields. Stamens slightly over half as long as style.

No. 11,346. Specularia pentagonia (Campanula) Sepals slender-lanceolate, half again as long as corolla. In no. 11,345 the sepals are 1/4 or 1/3 as

* finely tomentulose

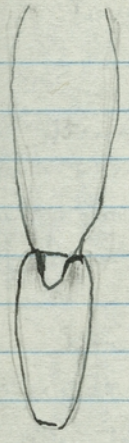
long as corolla. Style nearly as long as corolla, stamens 3/5 as long. Filaments with dilated (narrow-triangular) bases, perhaps otherwise lanceolate-triangular filaments. Grain fields.

Specularia pentagonia
v No. 11,347. (Campanula)

Cor. tube short, the limb subrotate, 5-lobed, the lobes broad, rounded. Stigmas 3, linear. Style not clavate. Anthers white, 4 times as long as the short dilated filament. Stamens included in tube. ↑ glabrous Corolla purple, Calyx-lobes linear-acuminate. Charming and abundant ornament of the wheat fields.

- Cont. 11,104. Fruit globose, succulent, 3.5 cm. diam., yellow or reddish.

- Cont, no. 11,316.



A.

← A. Petal - or at least organ occupying position of petal, consisting of a lower scaly portion, the scale inflexed at tip and bearing on the shoulders a long awn on each side.

The stamens are short, strictly alternate with these structures (A) and inserted under the edge of a disk that bears the short style; style 1, stigma 1.

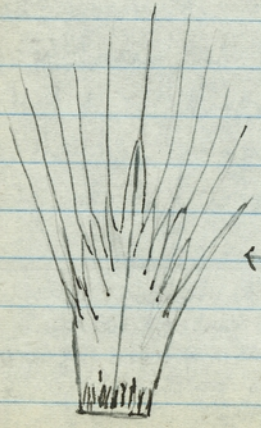
Bars on windows: throughout Palestine and Egypt, each residence has the windows of the lower story barred, like a prison, often the second story also. This is solely to prevent house-breaking, robbery.

Cont. no. 11,316.

B.

← Disk with single style, but showing crease on one side. I got my clue to this by noticing that the ovary was developing unsymmetrically and is smooth on one side, roughish-glandular-bristly-hispidulose all over except the one smooth side. In one case I find the single style borne in the crease.

C.



↔ Sepal.

Cont. no. 11,316.

There are five of the organs (as roughly diagrammed at "C") in a circle. These organs occupy the position of a calyx; they are at the summit of the ovary; they alternate regularly with the organs ("A", p. 393) called petals in this diagnosis. The 5 petals have an inflexed tip which is characteristic of many Umbelliferae (though the auras are a novelty to me). The 5 stamens alternate regularly. There is a structure which can be called a "stylopodium"; although only a single style, there is a crease in the stylopodium making 2 unequal halves as if one were abortive. The ovary looks exactly like half a carpel with an abortive cell on one side.

The flowers are in compact

simple umbels; a whorl of pinnatisect bracts with the margins scarious-edged; pedicels bearing near the middle a whorl of 4 bractlets pinnatisect.

It would seem that this plant, an annual with terminal nodding umbels, should, under this interpretation be referred to Umbelliferae. No genus in Post's Flora seems to cover it. Of course it is "out of rule" for the calyx to be so enormously (relatively to usual condition) developed; but the development is morphologically explainable. The inflexed tip to the pedicels is quite in accord with many Umbelliferae.

D.F. Higgins and I walked northerly to the village of Zelefeh, set in the low hills. Our way lay by old foot paths through the wheat fields over the low swelling curves of the first gentle slopes of the hills. We started late and reached the village, 4 miles, about sun-down. The wind fell before sundown and the sounds of evening life in the village came down the air; the bleat of sheep, the call of goats, the bray of donkeys, the cries of children, the bark of dogs. The village is pleasantly situated and rather attractive. It is an agricultural community. Herds of cattle pass us. But I have not seen a "corral" in Palestine or enclosure for cattle; nor a cattle fence, nor a barn, nor a hay-stack. Apparently no hay is made. For nos. coll. see p. 384.

Keith Roach, Asst Commissioner of the British Mandate. "A lad in Syria followed a party into the excavations where he had no business to be. A soldier saw him and struck him. When he came out he raised his shirt; we saw four bloody wounds. Well, you can't expect a people to love you if you treat them so."

"As to veracity I never trust the native. I do not mean to say they never tell the truth; they may so 0/0; but you can never tell which is the 20 0/0. Besides it is a part of their religion to beat the infidel. A pious old sheik I know spends all his time in praying but he lies to me steadily."

There is general agreement about lack of moral responsibility on the part of the natives. Stealing from the infidel is no sin.

Cont. no. 11,324. Ovary superior! Sepals ovate, narrowly scarious-margined, persistent. Stamens alternate with petals. Sepals distinct; petals distinct. Stamens united by their filaments into a tube, the filaments free only at apex. Leaves simple, with stipules.

Cont. from p. 382.

outcrops where there is always a garden of flowering native things. It is a beautiful clear day and balmy with the soft air of spring. I get down on the ground and thus keep finding new things in one small area. The peasants are ploughing in the fields below and a camel train with an exceptionally sweet chime of bells goes by.

– The "plant" at Megiddo consists of a stone-mud-cemented structure 100 ft. long (main building, forming one side of a square, which is occupied by one-story buildings (quarters for servants, kitchens, store-rooms, garage shelter) and walls. There are 16 bed-rooms in the main building, besides dining room, offices, record rooms, shop, dark-rooms, etc.

It is very pleasant to botanize from such a base in this primitive country. Each time I go back into the hills I discover some new secret place, as it were, some nice little valley, all remote and as if wild. And it is full of suprises in plant life all the while. – Over all this great plain in front and the immediate foothills there is not a tree to be seen standing on the terrace at Tell Megiddo.

No. 11,347a. Silene dichotoma Ehrh. var. racemosa Rohr.
Apparently perennial. Cor. white. Petals divided into spreading linear-cuneate segments; crests 2, ovate, mostly entire irregularly denticulate at apex. Flowers sessile, spreading, not pendulous.

No. 11,348. Silene cucubulus Wib. (Silene inflata Sm.) (Silene venosa (G. lib.) Aschers)
Bladder Campion.
Cor. white. Petals divided into 2 oblong segments.

No. 11,349. Bromus scoparius Huds.
Rocky station. Grass

No. 11,350. Trigonella lilacina Boiss.
350a Bupleurum nodiflorum Legum.

No. 11,351. Campanula stellaris Boiss.
Cor. pale blue, tubular, 4 mm. long, cleft 1/3 into elliptic-ovate lobes; anthers 1 1/4 mm. long; st-

anena a little over half length of corolla; style a little shorter than corolla. Rocky hillslope.

No. 11,352. Althaea

Cor. 5.5 cm. long, rose-color. Petals broad deeply and broadly notched at apex. 3½ ft. R. J.

No. 11,352a. Nigella ciliaris DC.

Sepals yellow, roundish, strongly apiculate, 1.5 cm. l. Petals small, relatively inconspicuous, bearing a gland covered by a scale with 2 greenish spots just above, the petal ending in 2 slender or subulate but soft structures, these with rudimentary teeth at the angles, these teeth sometimes elongated and similar to central ones but not as long. Scale and border of gland, both, with a hairy border in crescent, so that the

gland is covered, as it were, by a double eye-lash.

No. 11,353. Lagoecia cuminoides L.

Rocky slope. Umbellifer.

No. 11,354. Ruta chalepensis var. latifolia

Cor. yellow. Petals hooded, emarginously fringed. Stamens 10. Odor very penetrating and heavy. Foliage, petals, punctate. Ovary 4-celled; several ovules in each cell. Filaments subulate.

No. 11,355. Anthemis sp.

Fields. Dog Fennel. Common.

No. 11,356. Reseda alba L.

No. 11,357. Lagurus

Rocky hillslope. See * p. 404.

No. 11,358. Scabiosa bidens (Sibth. et Sm.) Boissi

Rocky hillslope. Hds. flue.

No. 11,359. Phleum exaratum Hochst. not Griseb.

Rocky hillslope. Grass

No. 11,360. Chaetosciadium trichospermum

This umbelliferous grows in rocky places.

No. 11, 361. Parietaria officinalis L.

Sepals 4. Stamens 4; filaments ↑somewhat varniform. Ovary with a single sessile stigma.

Rocky places.

No. 11, 362. Scrophularia xanthiglossa var. gemina Boiss.

Corolla red. Stamens strongly declined, exserted. Lateral lobes of corolla incurved approximate in such a way as to close mouth of corolla.

Rocky places.

No. 11, 363. Polycarpon tetraphyllum L.

Prostrate, in beaten roadways.

*[Nos. 11,357 to 11,363 are collected in the pass which leads through the hills to Egypt, back of Megiddo. It is the old road of the conquerors and the conquered.)

- As early as I am up in the morning ↑5:30-6, the fellahin are up earlier — plowing, going to the fields, driving herds.* Wherever one sees them they are, usually, busy, steadily at work. Along the roads they are moving rapidly, especially if walking. A large gang, I want to call them coolies, are working for the Megiddo Expedition. So the ant-swarms of humans used to work building or digging for David or Ramses or Senacherib.

- The winds: Beautiful clear quiet days since the rains stopped. Sometimes, perhaps usually, the wind begins about twelve o'clock but dies by sunset with calm nights.

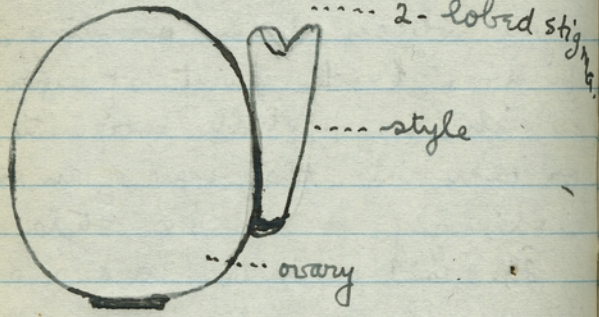
* I was up at 4:30 one morning and they were going to the fields.

No. 11,364. Theligonum Cynocrambe (Cynocrambe prostrata Gaertn.)

Ovary globose (the main body of it) with a constriction near the base, forming a sort of discoid body on which the main portion is seated. Ovary with 1 seed, the embryo horse-shoe-shaped or at least curved in a bow, the cotyledons narrow-elliptic, face to face, plane. Stems simple or usually, the foliage leaf on the main stem is stipulate and clasping with the basal clasp running around stem. On the side opposite insertion of leaf where the encircling clasp is very narrow are borne 2 somewhat filmy minute flower-like structures to be described in a moment. In the axil proper are found a cluster of flowers with small foliaceous bracts laterally placed. The ovary I have described is about half grown. The smallest ovary I find bears on the side a sort of narrow cuneate structure (like a bractlet), which is membranous. Since I find no stigma on the well-grown ovaries I guessed this structure covered a stigmatic process at base — but an excellent binocular of good power does not reveal it. On this smallest ovary which I am examining I find a black point at apex which is probably stigmatic or represents the scar of an exceedingly caducous style.

The "axil" opposite bears a set of 2 "flowers", tubular-funnelform and yet — that is not at all really the phrase to describe their shape. They are slender, as if bilabiate and with both strap-shaped

lips closely recurved or rather recoiled. The tube portion bears six slender or thread-like filaments, very hair-like without any trace of anther. They are inserted low in tube. The "lips" are entire, truncatish. The flower is white. I now get a still younger ovary with the lateral structure fleshy and more "stigmatic" physiologically:



The proper interpretation seems to be, then, a lateral style, shortly cleft at apex. →

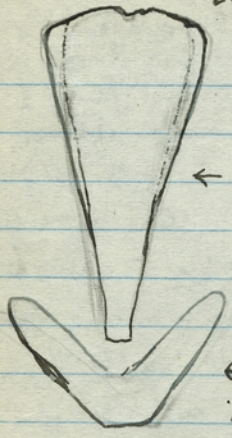
The flower is really to be described so: a clavate tube with rather broad lips; 3:25 mm. long. I now find 2 dehisced anthers in a flower, twisted and ready to fall, 1:25 mm. long. Probably there were 6 anthers corresponding to the 6 filaments. I have now found quite a young bud with 6 stamens and 6 anthers.

I sketch below a pair of the male fls. They stand a trifle too far apart; and I have inserted in one flower the anthers as I found them in the bud. This work is done with a Leitz Binocular, a 10 eye-piece.

Male Fl.: Rough diagram.

Megiddo, Palestine (Zelafeh)

No. 11,365.



Andrachne telephioides L.

← Petal

← Forked gland opposite petal and covering its base in the fl.

Stamens united by their filaments for about 1/4 their length. Sepals ovate, acute, scarious-margined; united at base distinctly.

Stamens alternate with petals

Ovary ↑ depressed-globose; ↑ adnate by very base (united part) to ovary.

Fl. over 4 mm. broad, rotatish.

Petals 1.25 to 1.50 mm. long.

I now perceive that the

flowers are dioecious. The staminate are quite sterile with no ovary rudiment. The ♀ calyx is more distinctly united at base and is

styles 6, short, ↑ spreading in sets of 2, but not united in sets of 2 any more than to contiguous styles. There are vestiges of the glands (see p. 410) in ♀ fl. No, not vestiges, but glands.

Calyx not united to ovary at base in fl. As the ovary grows the very basal part is persistent on ovary, as well as whole calyx and gives an appearance of adnation. It is better expressed in this way: The Calyx is persistent and rotate. The united basal portion which is minute in the fl., becomes enlarged in the fruiting stage and thus the lowest part is and looks more adnate than the calyx in fl. stage.

I have been misled by observations in the field: the

ovary is wholly superior! and it is clearly 3-celled! (Cancel previous statement that it is 6-celled.) Erect branching herb – the stems a little woody at very base.

No. 11,366. Calendula aegyptiaca
Fls. yellow. Diffuse

No. 11,367. Oenanthe prolifera L.
Umbellifer with fasciated rays. Swampy ground.

No. 11,368. Scrophularia
(S. rubricaulis Boiss.) michoriana Coss. et Kral.

No. 11,369.
Artichoke.

No. 11,370. Scirpus maritimus L.
Stolons developing tubers at end, then an erect shoot. Marshy ground.

No. 11,371. Gaudinia fragilis (L.) Beauv.
Grass

No. 11,372. Micromeria nervosa (Desf.) Benth.
Labiate. grows in rocky places.

No. 11,373. Parietaria alsinifolia Del.

No. 11,374. Aegilops ovata L.
Grass.

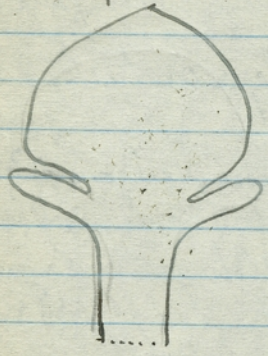
No. 11,375. Crupina vulgaris Cass.
Rocky slope. Compos.

No. 11,376. Helichrysum sanguineum (L.) Kostel.
Rocky slope.

No. 11,377. Psilurus incurvus (P. aristatus Trev.)
Rocky slope. Grass.

No. 11,378. Stachys neurocalycina Boiss.
Cor. 1,5 cm. long, erose (red) Calyx a little oblique, almost equally 5-toothed, the teeth spinulose-tipped. Calyx 10-nerved. Upper pair of stamens the longer, all the stamens with flattened ciliate filaments. Upper lip erect, open, notched at apex Lower lip: middle lobe broad, rounded, not notched, with rather small lateral

lobes; palate hairy.



Lower lip.

No. 11,379. Cuscuta palaestina Boiss

No. 11,380. Linum strictum L. var. spicatum (Lam.) Reichenb. Strictly erect, simple from base

No. 11,381. Campanula hierosolymitana Boiss. Rocks. Filaments ovate, ciliate. Style not dilated upward, narrowed a little at apex, glabrous!

No. 11,382. Mercurialis annua Rocks. Joints conspicuous. by swollen! annual!

No. 11,383. Plantago

No. 11,384.

Comp.

No. 11,385. Cicer arietinum L. Cor. dull pink. Legum. grain fields

No. 11,386. Medicago scutellata Mill. grain fields.

No. 11,387. Salvia Syriaca L. Flower 2.4 cm. long. Cor. white. Upper lip falcate-arched, conduplicate i.e. flattened sidewise, notched a little at the folded apex, sparsely bristly along back or midrib that is. Lower lip: lateral lobes revolute-cylindric, projected in line of tube, the middle lobe as it were pendulous, 1/4 sphere-shaped (hollow sphere), that is open-concave, pale yellow or straw-color, all the rest of the cor. white. Calyx 2-lipped; lower lip deeply cleft,

upper lip with the narrow tip recurved, the tip truncate as if worn 3-toothed, the teeth small, that is dentate. Throat gaping. Cor. tube with a scale on lower side, the scale spreading, with laciniate edge. Style and filaments glabrous, the "spoons" connivent by their tips. Bush, erect; woody stems 2 ft. h.

No. 11,388. Cruciancella macrostachya Boiss. C. latifolia L.?

No. 11,389. Notobasis syriaca (L.) Cass. This thistle grows very rankly 3-4½ ft. h. on the summit of the Tell.

While I put specimens in press in a high wind, D. H. Higgins said: Well, I see you have developed a special technique.

Tell-en-Nasbeh. cf. top of p. 420.

No. 11,390. Psoralea bituminosa L. Hillslope. Fls. while. Leguminous.

~~390a Solanum incanum L.~~

No. 11,391. (Campanula) Specularia Speculum-Veneris (L.) wheat field; slope of the Tell. Tens.

No. 11,392. Anchusa italica Retz. Borag. Cor. blue. Slope of Tell.

No. 11,393. Linum rigidissimum Post Cor. yellow. Wheat field, slope of Tell.

No. 11,394. Campanula strigosa Russ. wheat field, slope of Tell. Cor. purple.

No. 11,395. Althaea acaulis Cav. Cor. rose-pink very showy. Flowers in clusters at the ground. Malvaceous.

No. 11,396. Aristolochia manoreum L. var. latifolia Boiss. Pods on the ground. Wheatfield. Slope of Tell.

Megiddo, Palestine, Apr. 2

— The days of botanizing here at Megiddo fly by too quickly. The country-side is full of wild life. The roadsides are bordered by gardens of Poppies, Scabiosa, Bupleurum, Chrysanthemum with dissected leaf and numerous other flowers. Each day that a trip is made into the hills in a new direction I strike a gold mine of plants not previously, species that in this district are localized. The weather is very delightful, calm sunny spring days:

"For see the winter has passed,
The rain is over and gone;
The flowers appear in the land;
The time of singing is come,
And the turtle-dove's murmur is heard in our land."
— Song 2:11-13.

The wind begins to blow about

Cont. p. 419.

Jerusalem,
Apr. 25, 1926.

A party of us went out from Jerusalem to see Bade's excavations at Tel-el nasbeh and then went into Ramallah village to see the dancing of the maidens. This was a great festival. The girls were dressed in their finest embroidered garments. All of them had the heavy head dress of silver coins which I described on p. 284 ante. The girls danced alone, (by themselves), a set of four or six advancing in a dancing step toward a similar company and then retreating. We were entertained at dinner by

the Jones' at the Friends Boys School. W. F. Bade, of course was there; A. C. Lawson, geologist, my colleague at Berkeley, and some others I have forgotten.

cont. from p. 418

twelve o'clock and is fresh until near sunset; when quiet nights follow the day. The condition referred to by Stanley Fisher (supra 383) has not prevailed to any extent since I have been here.

Dr. Fisher, Stanley Fisher and I leave Megiddo, Apr. 23, in the morning by auto for Jerusalem. On this return trip I get a good view of Tell Dothan, a typical Tell at east end of the "Plain of Dothan", which is a valley. The settlement referred to above is on the lower slope of the Tell (cf. p. 298). We climb high to a ridge giving a fine sweeping view over a great basin in the hills, with "Samaria" in the center, a conspicuous inhabited hill. On this high grade we pass a flock of fat-tailed sheep, the first time that I have seen these enlarged caudal appen-

Apr. 26, 1926

Lodges. In a (grain) field we pass close by a flock of seven cranes (storks. cf. p. 368.) Stop at Tell-es-Nasbeh, p. 417.

No. 11.397. Solanum incanum L.
Corolla blue. Bushy plant 3 ft. h. Jericho. Solanaceous.

No. 11,398. (Paliurus aculeatus Lam. = Zizyphus Lotus (L.) Lam. Bush 2 to 3 ft. high, spreading. Jericho. Excessively spiny.

No. 11,399. Brassica incana L. (Brassica adpressa Bois.) Forming low weedy thickets. Jericho. Cruciferous

No. 11,400.
Tree 18 ft. h. with rounded head. Trunk about 10 in. diam. Mimoseae.

No. 11,401. Populus euphratica Oliv. Jordan River near Dead Sea. Tree 45 ft. h. Bark smooth, whitish. Leaves (young) narrow, Salix-like.

No. 11,402.
Flowers in sets of 3 under a bract, each with a perianth, 2 stamens and a pistil with 2 styles. Perianth irregularly and shortly lobed (or toothed.). Flowers deeply immersed in the axil of a fleshy bract, set snugly between it and the fleshy bract. The 3 fls. are distinct from each other and from the bract. Post says of Haloxylon, "flowers connate"; but in Key, "flowers not connate". Perianth may be said to be trifid at tip or rather tridentate. It would pass for Arthrocnemum glaucum Del. save for habit and size. This 11,395 is a shrub 2 to 3 or 6 ft. h.

Shrubs on Dead Sea Floor

No. 11,402. Rounded bush mostly 4 to 6 ft. h.

No. . Suaeda-like. Low round bush 1½ to 3 ft. h., thick short leaves like half-a-pea in size or a grain of wheat.

No. . Suaeda-like. Slender branches with whip-like ends. 1 to 2½ ft. h.

No. Atriplex Halimus L. 4 to 8 ft.

No. . Tamarix 7 to 18 ft.

- over -

Dead Sea, Palestine

- Mimosa-like herbs just coming up, in flats by Jordan River.

No. 11,403. Mesembryanthemum nodiflorum L. Calyx-lobes very unequal, one very long (linear), 2 short (linear), 2 intermediate (lanceolate). Flats by shore of Dead Sea, s. end. (in length but nearer the short ones)

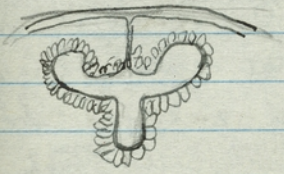
Petals longer than calyx. Leaves alternate, linear. Also near Jericho.

No. 11,404. Orobanche

Dry washes in the foothills near Dead Sea, on road to Jerusalem. Cor. yellow, its lobes subequal, rounded but short and broad, auricled on each side above the (a little) very short "claw", or portion above the tube. Stamens with woolly anthers, the pairs subequal. "A" is a rough sketch of one of the 4 placentae

in the ovary. Even in one ovary the placentae differ in shape. The ovules should be represented a little larger and thus filling up the

A.



space more completely. The plants form striking subjects in the washes, occuring 2 to 4 together. Bractlets 2. Calyx 5-lobed (cleft 2/5-way). Stigma enlarged, rounded, slightly irregularly umbilicate but not lobed. Anthers with horn-like cusps at base, slightly and bluntly mucronate at apex. Calyx regularly lobed. Cor. with a hairy ring near base, the stamens inserted in this ring and filaments hairy at base.

The headings are mixed up under Orobanche in "Post". This is Phelipaea lutea Desf. Bracts longer than calyx. Corolla lemon yellow, its lobes exist in anthesis. Calyx-lobes equal, but notice that generic char. in Post calls for 2-lipped calyx

— Trip to Dead Sea with Stanley Fisher, John Kellogg, Professor A.C. Lawson. On the Dead Sea plain we stopped at a Greek Monastery to make inquiry of road to Jordan River. The building is a large and prominent one in the midst of a desolate waterless desert plain of high temperature. A devil of a place to repent of your sins. Beyond this we soon dropped down to the lower terrace-plain of the Jordan River. Before this we had gone to Dead Sea and passed

through a series of eroded flat-topped relicts or "islands" of the desert of the second plain of the Jordan — characteristic desert scenery.

This evening swallows are flying in short circling curves over a group of buildings on the Street of the Prophets; it is just after sundown and I enjoy watching their rapid evolutions.

— Coming from Megiddo on the Plain of Esdraelon we saw at the plow a horse, which is unusual. The horse is very lean and poor. We pass a peasant on a fat sleek horse! They feed the horse which they ride for show! I saw two British tommies riding fairly sedately; immediately behind 2 native police, their horses prancing and cavorting and circling, covering 2 or 3 times the distance of the British soldiers.

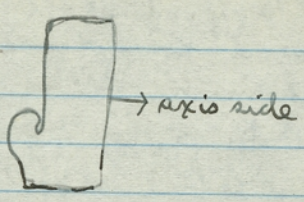
I go down to Jericho with A.C. Krasovsky, Dept. of Agr., Palestine, and Major Nathan, Inspector of Jaffa. We go first to Jericho and look over the site where they are to make a sub-tropical experiment station. The Jericho Orange is a rather fine orange, though not so fine as the Jaffa Orange which is very superior. On account of climatic troubles this season in Spain, Jaffa Oranges, next season's crop, are now commanding a very high price. G. says £60 per dunum (¼ acre) is being offered, that is £1200 an acre. It seems hardly credible – so high a price. £200 per dunum is asked for the land.

Balanites aegyptica is grown here. We go on to the Jordan River at Allenby Bridge and go down through the Tamarisk flats to the river, botanizing on the way. Prosopis stephaniana makes a low dense growth – 6 to 12 in. h. It is just budding. The det. is by Dinsmore from my verbal report. We come back to the cattle quarantine station and eat our lunch in a pest of small flies. Then we drive over the plain towards the Dead Sea, nearly to the Greek Monastery, then turn west to the mountain road. Long lines of moslems, on foot and on asses, are pouring out from the hills on to the Jericho Road. It is part of the Nebi Musa procession.

No. 11,405. discarded

Cor. lobes with purple tips. Stylar column 5-angled, with a central dome at summit, the intervals between the angles with a scarious gorge in this

upturned membrane.

Horn = 

Wadi near Jericho, the bushes very erect, with several trunks, 5 to 9 ft. h. Perhaps the many stems are due to cutting off in clearing for grain. A very striking plant in the wadi. Bark yellow, deeply fissured on main trunk. sandy-

No. 11,406. Solanum incanum L.
Low spreading bush in the wadi near Jericho. Cor. pink-lavender. Very spiny. 1½ to 2 ft. h.

No. 11,407. Asparagus
Rich flats of the Jor-

dan near Allenby Bridge. Rhizomatous, mouldy
No. 11,408. Glycyrrhiza
Erect, 3 to 5½ ft. h. With 11,407.
No. 11,409. Phalaris paradoxa L.
With 11,407. Grass
No. 11,410. discarded
With 11,407. Decumbent
No. 11,411. Bromus sterilis L.
With 11,407. Grass.
No. 11,412 Cyperus esculentus L.
With 11,407. Sedge.
No. 11,413. Parkinsonia aculeata L.
Cult. at Jericho.
No. 11,414. Fagonia arabica L.
Pods 5-angled acute
Looks like Fagonia. Wadi in foothills.*
No. 11,415. Capparis? discard.
Moulded! With 11,414
No. 11,416. Glaucium judaicum Bornm.
Petals yellow with a vermillion center. Looks like Glaucium. With 11,414. cont. p. 444.

* On road to Jericho from Jerusalem

On a trip to Beersheba with A.C. Grasowsky, Palestine Dept. of Agriculture and Major Nathan, Inspector, Govt. of Palestine. We run south to Bethlehem; at Hal-Hul near Bethlehem is a small state nursery where are grown: Cercis siliquastrum (native), Styrax (native), Populus euphratica, Olea europaea (wild Olive), Melia azedarach, Pistachia terebinthus, Sambucus nigra L. (native), Robinia pseudacacia (street tree in Jerusalem, now flowering freely), Pinus halepensis. — There is a fine spring here across the road from the nursery where we drink; the village of Hal-Hul, the highest village in Palestine. Children run into the road and "dare" the auto just as in California. Major Nathan says that a people as backward as the Arabs have within a few years taken to the automobile in the most astonishing way. They use a machine recklessly and do not want to ride in a Ford, considering it infra dig. Fares in a Ford are much cheaper. Turks did not permit autos.

Hebron seems a small town but it has a dense quarter hidden in the lower part of the city and contains 17000 people. The Arabs swarm in the narrow streets and live in caves like rats. We go to see Abram's Oak at the Russian Hospice. It is about 10 ft. through at the ground, branches low into three great arms, one of which is dead, the other two erect or spreading, rather short, each with a bunch of foliage. The present relic is about 14 ft. h. Major Nathan remarks that Dr. —, a physician friend of his, had never treated "a case of trachoma in an Englishman". Only another way of saying that cleanliness prevents trachoma. The machine suddenly stops and

Grasovsky gets out to interview or rather hold up an Arab who is with a donkey laden with oak brush. The Arab has no permit to cut. He gives a false name, but G. gets his real name from a passing Arab, orders him to report, and takes his girdle as evidence. An attempt is being made to protect reforestration. In the days of the Turks the government had to prove its right to state land; nowadays the individual has to establish title to land he claims. The state owns a considerable acreage (acres) which is to be put in forest, being quite unsuitable for cultivation. South of Hebron, there are slopes and "cañons", high-lying, very very rocky, which since four five years have developed considerable scrub oak, a stand 3 to 8 ft. high, which is sufficient to attract the attention

of the most indifferent traveler in this treeless region. There are occasional trees here and there, I mean individual trees at long intervals, which have been spared. There are "holy trees", that is trees which the natives associate with some religious motive and so have been spared the axe. — A camel, resisting its driver swings across the road; they are usually most docile. Nathan says the camel perspires only by small glands back of its ears. The female has no season (or rather is always in season); the male comes into season only for a definite time. He is then a very dangerous animal. — On the way to Bethlehem we meet richly dressed peasant women on foot, their dresses embroidered in reds and yellows in most pleasing and artistic designs. It is interesting to look below

all this richness and see naked feet or dirty feet in low sandals. They are going to the festival of Nebi Musa (Prophet Moses). It is noticeable all along the road to see small boys (6 to 10 yrs. old apparently) managing one or two camels. G. says there is a white Apricot here and points out a tree near Bethlehem. Thistle (no. 11,389) is also common around Bethlehem, Beit Jala, and south nearly to Beersheba. Goat herds are seen everywhere. They are the great menace to trees. They are taxed five times as much as sheep. — The natives (Fellahin) are primitive minded. They do not understand abstract ideas at all. Most of them in this out-of-the-way district do not understand what an hour's time is. So the wise

official put his question in length of time it takes to smoke so and so many cigarettes. — Poterium spinosum is common all the way to Beersheba. Near the Hebron vineyards G. remarked that the plant is used to put over bunches of grapes to delay ripening — in order to secure better prices a month later. It is also a honey plant. Used also for fuel in making lime. We pass lime pits. Not far from Bethlehem we stop to see a cluster of 3 fine Pinus pinea trees, — old ones, native (see photo). At the same place Rhus coriaria is growing in the clefts of the rocks. The vineyards here have the bunch trained along the ground (4 to 6 ft.); G. says he has seen such 5 meters long at Es-Salt.

We run on south through the hills, passing down into circular valleys filled with wheat and

barley fields and then up again. In these valleys not a habitation nor a village nor a house — so that the country has an unexpectedly wild & frontier look, - the villages being hidden in the hills. Climbing out of one of these valleys we start up a mongoose, like a large-sized cat but with stockier more cylindric body, and shorter legs. It is very hairy and gray. It runs fairly rapidly but a man might run it down. It goes rapidly up the slope through the very low scrub (4 to 12 in. h.) and since it is going in our general direction, I get a good view of it for some time. It is the Riki-tiki-tavi of Kiplings Jungle Book. As we begin to descend from the hills a pair of Blue Rock pigeons start up from the roadside - very

handsome birds. G. remarks that the berries of Rhus coriaria (see p. 435) are used in making drinks. He also pointed to mutilation of the trunk of Pinus pinea (see p. 435), the bark used by the natives to tan their water skins. — The country flattens out, with low rolling hills, wide barley fields and wheat fields, the tents of the Bedouins everywhere seen on the hills in the background. The harvest is beginning. In all the grain stands the plant is pulled up by hand and tied up into sheaves with its own stalk, just as was done in biblical times. The sheaves are loaded on camels in large though not heavy loads and taken to the threshing floor, where the tax assessor estimates the crop. The piles must not be thrashed until the

government official has assessed it. Beersheba itself is the modern Beersheba. It has some good-looking stone-buildings - well built, railway station, storage houses and so on, built by the Germans. It is the capital of a province of Palestine under the English administration, the governor being Bailey whom I met on the road. Nathan was the first military governor. He had a lot to say about the advance against the Turks in this region in the hills north of here Colonel Newcome, always very keen about getting to the top of hills, picked out a hill (near which we passed) and settled himself on top with a body of machine gun volunteers. But the next hill occupied by the Turks is a

bit higher. Well now it is bally rotten sitting on a hill and having some one shell you from a higher hill. So the Turks scuppered most of his men. Newcome was taken prisoner and a few men with him." We went through the War Cemetery. In this desolate desert waste it was odd to read the names on the graves - all English names from Herefordshire, London, Suffolk, Sussex - and Welsh names from Wales.

We ate our lunch, bread, olives, cheese and cucumbers, in the auto, in front of the administration building at Beersheba. A group of Arabs sat on the floor of the porch, discussing certain matters with evident pleasure in the telling and hearing. In the circle is a Sudanese black man, bearded, rather thinly, and not unlike a baboon or chimpanzee, certainly very like pictures of gorilla

with broad flat nose. He is a good-natured old fellah and lays down the law to the others in the most good-humored and satisfying manner. When we were finished with our lunch Major Nathan gathered up the substantial remains and beckoning to the black who came up to the auto he turned over the provender to him. The black took it to the porch, laid it down in the center of the circle, which suddenly fell quiet as they reached for and began to eat the repast.

There are two groves of Eucalyptus here. For such a region they are doing fairly well — as well as on poor soil in the drier parts of the San Joaquin Valley.

Beersheba is a sheep and cattle market.

Near Hebron is a fine Pistach-

is terebinthus tree, which I photograph — 34 in. diam., about 55 ft. h.

On the return journey it was very pleasant to look down into the vale west of Hebron, it is so fertile and filled with cultivated gardens and sufficient trees to be a welcome contrast to the dry country where we have spent the day.* Nathan remarked on the dissappointment he experienced on seeing the asphodel (I had just coll. 11,452), "flowering fields of Asphodel" in Paradise, he quoted. I get out of car to photograph a camel and its great load of sheaves. The woman, in charge, seeing my purpose, turns and runs, leaving the camel to graze and be photographed at leisure. For plants coll. this trip see pp. 446–450.

* When I first saw Hebron (in Feb.) it seemed bare and desolate! See 42:158.

— Today is the return from Neby Musa and the streets are full of marching crowds of Moslems with their flaming banners of many colors. I chanced into a great crowd at the Jaffa Gate with the mounted police on guard and a wagon-load of British Foumies with rifles. I went into Damascus Gate down King Solomon Street which is interesting for its old houses, turned down Street of our Lady past the "Prism of Christ" and under the arches to St. Stephens Gate; outside to observe the decorations above it, the lions in relief right and left, cursing an importunate beggar, then back to Lentil Convent Lane. A flock of goats came along, for it is near sunset, and a lot of kids with them. The kids are rather cunning — the only form in which I

can abide goats. Then out at Herod's Gate, which is the entrance way for most herds and flocks. There are many flocks just outside the Gate this evening. Buyers go amongst them, suddenly feeling the haunches of the sheep with their hands. It is sheep market day at Damascus Gate apparently. The sheep are handled so much that the flock can be held nearly stationary by the shepherd. They are fat-tailed sheep, whitish, with a pink brand above the tail. The sheep stores up fat in the tail which may become marvelously fat and liver on this reserve during the dry season. It is the camel's hump over again. Most of these sheep have marvelously Semitic cast of countenance!

Jerusalem to Jericho, dry hills and wadi in foothills.

Cont. from p. 429

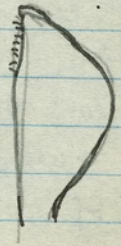
No. 11,417. Pegamum harmala L.
Ovary 3-celled; ovules several, on central placental. Style grooved and twisted above like an old-fashioned "bit", but with 3 ridges on the spiral. Petals dull white, 3-green-veined. Stamens 15. Petals 5, oblong. With 11,414 Stamen fils. dilated strongly at base.

No. 11,418. Centaurea sp.
Dry ground.

No. 11,419. Heliotropium rotundifolium Sieb.

No. 11,420. Limonium Thouini (Viv.) Kuntze.
Dry hills. Good Samaritan Inn.

No. 11,421. Phlomis Nissolii L.
(Jerusalem Sage)



Upper lip.
Compressed.

Apr. 28, 1926.

Calyx strongly 5-angled, shortly 5-toothed. Lower pair of stamens a little longer. Filaments flattened, only slightly hairy. Cor. dull saffron. Good Samaritan Inn. Middle lobe broad, rounded, emarginate; lateral lobes small, notched

No. 11,422. Ballota undulata (Fresen.) Benth. Labiate.

No. 11,423. Anthemis sp.
Comp.

No. 11,424. ? Comp.

No. 11,425. Erucaria Boveana Coss.
Dry ground. Crucifer. Petals pink.

No. 11,426 Valerianella Tuberculata Boiss. (Good Samaritan Inn)

No. 11,427. Beta vulgaris L. var. perennis L.
moulded T. brown out one sheet Good Samaritan Inn

Beersheba, Palestine,
cont. from p. 441.

No. 11,428. Pistacia palaestina Hebron

No. 11,429. Pinus pinea L. Hebron.

No. 11,430. Poterium spinosum
Berry pink, with a close set crest at apex of 4 green calyx parts or sepals. Hebron

No. 11,431. Cistus villosus L.
Pink Cor. Hebron

No. 11,432. Pistacia ? Hebron

No. 11,433. Gypsophila parrigens (L.) Boiss. Beersheba.

No. 11,434. Polygonum Bellardi Beersheba.

No. 11,435. Glaucium grandiflorum Beersheba

11,435a

No. 11,436. Spergularia diandra (Guss.) Heldr. & Sart. Schismus barbatus A. Chev. Beersheba. Grass.

No. 11,437. Achillea Santolina L.
Comp. Beersheba

No. 11,437a.

Caryophyll.

No. 11,438. Erysimum repandum var. rigidum Beersheba.

No. 11,439. Reseda Beersheba.

No. 11,440. Plantago Psyllium L. Beersheba

No. 11,441. Diantlus multipunctatus Sm. wadi 5 mi. n. of Beersheba.

No. 11,442. Pimpinella moabitica Bst with 11,441.

No. 11,443. with 11,441. (in Post)

No. 11,444. Pimpinella moabitica with 11,441. Comp.

No. 11,445. Peganum Harmala L. with 11,441. Dull white cor.

No. 11,446. Ononis antiquorum L. with 11,441. Cor. pink. Spiny ↑ legume.

No. 11,447. Allium stamineum Boiss. with 11,441.

No. 11,448. Eryngium creticum Lam. with 11,442

Beersheba, Palestine
Wadies 5 to 10 mi. N.

No. 11,449. Statice thouini Viv.

No. 11,450. Paronychia sinaica Fenzl

No. 11,451. Anchusa hybrida Ten. Borage.

No. 11,452. Asphodelus tenuifolius Cav.

No. 11,453. Lagoecia cuminoides Umbellifer.

No. 11,454. Limonium thouini (Viv.) Kuntze

No. 11,455. Phlomis russelii L. Labiate. Same as 11,421.

No. 11,456. Hyoscyamus reticulatus L. Tall branching plant. Usually much more bushy and a foot taller.

No. 11,457. Centaurea Filo. white. 1/4 plant. 16 p.m.

No. 11,458. Reseda lutea L.

No. 11,459. Anthemis Cornucopiae Comp.

No. 11,460. Trifolium purpureum Lois.

No. 11,461. Picris radicata Less. Comp.

No. 11,462. Scabiosa palaestina L.

No. 11,463. Convolvulus oleifolius Cor. pink. Nyctaginaceae. Stamens 5, a little unequal; anthers sagittate at base; filaments inserted on base of tube. Styles 2, united to middle, the united portion densely hairy. Sepals ovate, acute, very hairy, nearly distinct. Ovary superior, 2-celled, 2 ovules in each cell.

No. 11,464. Catananche lutea L. Comp.

No. 11,465 Hordeum bulbosum L. Gras.

No. 11,466. Scorzonera papposa DC. Comp.

No. 11,467. Comp.

No. 11,468. Echium angustifolium M.B. Borage.
Dahariyeh.

No. 11,469. Asphodeline brevicaulis (Bertol.) J. Gay. Liliaceae. Hebron.

Perianth bright straw-yellow, brownish outside. Filaments with a distinct dilated base, those opp. inner segs. shorter. Style minutely cleft at apex. Fils. constricted above basal dilation and then a little dilated. Basal dilation "icy-papillose". Ovary 3-celled, 2 ovules in each cell.

Jerusalem to Haifa, May 1.

Went by motor stage. These highlands from Jerusalem to Nablus and beyond are terraced to a remarkable extent. It, the terracing, with their rocky bleak character, gives them a character which seems more and more distinctive the longer one studies. The rock

walls not only run horizontally but up and down — in places appearing in clear relief on a gentle slope like the melted ridges on a mutlet of a bryophanthe — the only thing I can liken it to. The slopes bear, often, scattered olive trees, less commonly dense orchards of them — but this one tree tends to emphasize the austerity and barrenness in a way. In front of Jenin are pretty tree gardens, but we are soon out on the bare expanse of the plain of Esdraelon. We pass through El Ful, a new Jew town. The Russian Jews predominate everywhere — and one comes to learn them beyond fail, the facial type is so marked, a long low straight pointed nose — betraying Semitism not by the nose scarcely as by the

eyes and face generally. We pass Balfouria, another new Jew town, and climb the hill to Nazareth. Nazareth, sitting in its hollow! with its picturesque cypress trees tall and old, bursts upon us happily and gladsomely into attractive setting. Out of Nazareth along the ridge, down to the plain, then over a low ridge with much natural brush, along the plain by Carmel to Haifa. I

The run to Beyrout is now in summer greenness — as in contrast to my experience last Feb. The first thing one says: see the trees, the tall or large rounded-headed trees! It warms one's heart to see again the trees in the landscape! The garden area at Sidon is very fine — they have wonderful oranges and the most mar-

velous loquats I ever saw! They are as large as small pears — which isn't very definite — but say, as large as Moorpark apricots — but of course not the same shape. We get into Beirut after 9 in the evening. I was up at 5:30 this morning. wrote up my field notes and packed until after 2 o'clock last night — a heavy day! (in Jerusalem)

Dr. Geo. E. Post, — Head Professor of Surgery in the Syrian Protestant College. He was always active and much ahead of his time when young. He graduated from college so early that he had to wait a year or two before entering Medical College. He was very energetic. He rode a horse always through the streets of Beirut and always at a fast pace. He would ride

the same in the mountains and do in 4 hrs. what was usually done in 8 hrs. He knew Arabic exceedingly well. When other men spent their leisure in sports he was in his herbarium & field studying plants. There is at the American University in Beirut a science building called Post Hall. It has in it a marble bust of Dr. Post. There is a Rue Post in Beirut. After Dr. Post had brain fever he was more or less deaf. It is said that brain fever was the result of his intense application in the study of Arabic. This evening I was the guest of President and Mrs. Dodge of the American University at supper. Mrs. Dodge said "Dr. Post was very energetic. I knew him but slightly but have two distinct memories of him; one of his coffee flying out over his hands as he made energetic gestures with his arms, the other the large way in which he put his hands up to ear on account of his deafness." President Dodge took me all about the University, from building to building, and finally to the Dental School which occupies Dr. Post's old residence. Dr. Post was for a long time the only dentist in all Syria!

The information on p. 453 is from Prof. Day of the American Mission.

Professor Day accompanied Post on many of Post's expeditions. A mule or two carried the plant presses. On his riding animal Dr. Post had a couple of saddle-bags filled with cartridge paper. As he went along plants were gathered and thrust down into the saddle-bags between the cartridge paper. When a stop was made at luncheon or at night the plants were transferred to the presses and notes written up. President Dodge speaks of Post as a remarkable genius.

The herbarium at the University occupies a large and fairly well-lighted room on the second floor of Post Hall. It is shelved in 26 cases, each case with 4 tiers, the case itself being about 4 ft. h. and 4½ ft. broad. The herbarium sheets are 16 x 11. The genus covers are of very thin stock and the name is often mutilated, torn or missing. On the corner The mounting sheets, to which the specimens are glued, are quite thin white paper. There are numbers on the corner of each genus cover — perhaps a shelf number referring to a manuscript list, but Professor Day cannot explain

it to me. I suspect the herbarium has not been used much since Post's day. The University buildings are on a slope rising sharply from the Mediterranean. It is a superb situation - the blue expanse of the great inland sea and across St. George's Bay the snowy heights of Sunnin. It's very fine.

- Chaetosciadium trichospermum Boiss. About 7 sheets in Post Herb. Conspicuous petals, entire or notched at apex. No involucre; involucel of about 9 slender lanceolate or subulate bractlets.

- "With the multitude of my chariots I am come up to the height of the mountains, to the sides of Lebanon, and will cut down the tall cedar trees thereof, and the choice fir trees thereof: and I will enter into the lodgings of his borders and into the forest of his Carmel.

I have digged and drunk strange waters." - 2 Kings 19:23-24.

- Dr. Geo. E. Post. - Was a fine surgeon of the old school. While he knew little of asepsis his vigorous and daring mind, powerful will and determination, made him a great success for his time.

- Native curiosity. - Today to the American Consulate to see about the shipment of my box home. As I talk to the chief clerk the natives who are present all listen in and stand in a circle and stare at me. If I open my purse in the street they will crowd up and look in to see what I have. One of the bystanders at the consulate asked me if I were from New Jersey or Conn.? These people are like children - they have no natural reserve or diffidence.

- Sir Herbert Smith-Woodward, the paleontologist, discoverer of the "Piltdown Man" is here at the Museum working on fossil fishes. Lady Woodward is here also helping him. I dined with them one day in the Commons Room and found that they knew a number of California people.

- Took supper this evening at the Crawfords. Professor Crawford was born here; was a missionary in the interior for 11 years

and then brought here to the University. He said: "Since the war Moslem and Christian have been drawing nearer together, partly because of a common cause in the war, partly because of mutual antagonism to the Jews. Some say this approach is only a passing one — but there are signs that it may be permanent. Certain cries or as we would say slogans have been formulated: "We were Arabs before we were Christians; we were Christians before we were Arabs." The Jews in Palestine originate from many different countries and are very different, in spite of being Jews. It is desired to weld them into one Zion by teaching Hebrew to all. If so, it will tend to set them apart from other influences in Palestine, which will be bad. If however they, by population, gain the ascendancy and have a real majority, England will yield to them; for England bows to democratic institutions. England promised the Jews a great promise. England now says: Ah, we promised you a National Home, we did not promise you a National Government. But a National Home to be a real living home must have its own government."

- Had supper at home of President and Mrs. Dodge May 3. They have a comfortable home, quietly but exceedingly well and tastefully furnished. Both are delightful persons to know.

- John Finley, Assoc. Editor N.Y. Times, and author of a "Pilgrim in Palestine" arrived here today, May 6.

- Karl Buswell and I left Beirut at 7 this morning. Drove past Dog River to Tripoli, where we had lunch in the very clean Hotel Central. Then we turned towards the mts. passing over low foothill rolling land with extensive orchards of olives. Then we began to climb and soon had wonderful views of the mountain gorges and the snowy crests and snowy slopes of the high Lebanons. Highly picturesque villages nestle high on the mountain sides. I take two pictures of the village Tirza, nestling in a valley below the road, high above east the snowy crests. We go on. More splendid views of the main gorge with its precipitous walls, in the bottom of which flows Nahr Kadisha. We come around a turn, across a hollow is the village Has-roun, most beautifully situated. My phot. should show the Lebanons rising splendidly above. We follow around the mountain sides at about the same elevation, pass through Hasroun, and so on around to Becherra, our destination, where we put up at the Grand Hotel Liban. We go for a walk along the margin of the Kadisha Gorge and secure fine views of waterfalls. We descend the walls a short distance

(Cont. p. 460)

—[Cont. from p. 20, vol. 42.
Dr. J.K. Small also spoke of the paper by Clements and Hall as if it were a curiosity or somewhat strange and freakish, and referred to Hall as having been thoroughly "Abamentized". Cf. Hall and Clements' Phylogenetic Paper.

[Cont. from p. 459] and collect the following:

No. 11,470. Cupressus sempervirens L.

Slender trees 20 to 35 ft. h; the axis is pruned high, to secure fuel, and by excision of the lateral branches the axis forced higher and higher. The wood is highly valued by the mountaineers. At a distance they look like firs. I saw them on the sides of the gorge in a natural stand and at the distance of a mile or more in a straight line took them for firs.

No. 11,471.

Tree 10 in. diam., 40 ft. h.

- Edw. Stanford Ltd., 12 Long Acre W.C., London, Map of the Countries between Constantinople and Calcutta. 1923.

- Bartholomew's Quarter Inch Map of Palestine. John Bartholomew and Son, Ltd. Has a detail vegetation map.

- Bartholomew's Map of the Middle East

[Cont. from p. 466] less richly ornamented. So do not lough at this request but when opportunity offers go forth and capture me a mule — or several. The mule, I assure you, has his points. Of course the average man has tried to load all his own obstinacy on the mule — ↑un but this is simply a smoke-screen to divert attention from, or scouting of, his own major foible. Man is really the most obstinate of all the creatures in spite of his very successful attempt to set up the mule in that unenviable position. — W.H.J. — Aug. '26.

[Cont. from p. 454.] Mrs. Dodge is a daughter of President Bliss, a former President.

Beirut Addresses.

- Dr. and Mrs. Edwin St. John Ward, University
- Karl Buswell, American Mission.
- Dr. and Mrs. J.S. Crawford, University
- President and Mrs. Bayard Dodge, University (Mrs. Dodge is a relative of Blatchford of Jerusalem Near East Relief.) Dr. Dodge is described to me as the most beloved man in Syria.
- Forrest Crawford, son of Dr. Crawford. asst of Day.
- Professor Alfred E. Day, Biology, Am. Univ.
- Shakeeb H. Haddad, maker of Jezzine knives, 26 Souk Ayas.
- Karl Porter Buswell, American Mission (Y.M.C.A., Jerusalem, in about 4 mos.)
- Prof. Arthur Avery Bacon, Prof. of Physics, Am. Univ.

Haifa Addresses

see p. 472.

- Miss Effie Newton (an English woman)
- M. Raghet, Sub-Inspector of Agriculture and Forests, Northern Circle, Tulkarm, Palestine.
- Colonel Sawyer, Director of Agriculture, Palestine Government.
- Amram Kazenoff, Director of Agriculture, Palestine Jewish Colonization Association.

Collecting Plant Specimens

Driers - Felt Driers. Corrugated Boards. Cutting of corrugated paper.

Transportation - Animals. The Horse. The Mule. The Donkey.

Specimens - Insufficiency of specimens without notes, an example, Arctostaphylos myrtifolia.

- Equipment. Lenses. Cameras. Cheaper ? Field Am. articles can often be bought abroad than at home (viciousness of protective tariff). Cf. Sat. Eve. Post circa Feb. ? 26.
- "The Emigration Laws are working" and remarks by Pres. Coolidge, as to why America deserves the best.
- Measuring tape.
- Cf. Encycl. Brit. sub Herbarium.
- Cf. p. 460 ? = next vol. p. 22
- Cf. Edwin Lees, Botanical Looker-Out, p. 438, as to rarity.
- Neither Europe nor Asia nor South America has any mountain gorges more beautiful than those of the Sierra Nevada. — Memories of Travel, p. 251 James Bryce.
- Pour Cyberlorum, a guide to collecting plant specimens.

Collecting Plant Specimens

– Equipment, Personal: Clothing. Shoes, I use fairly loose shoe which is hung by wearing two pair socks.

Plant Presses. Japson Pick
Transportation. Animal Equipment. Pack Saddles. Kyaks. Lash Ropes.

– Basis of scientific work. There should be first rate records of excellent plant material. A paper may be a treatise of high merit – but it lacks permanent basis if the plant materials on which it was based have not been preserved.

– Collecting of various Kinds. Book collectors. Items valuable solely because rare. Intrinsic merit of book of no importance if it is available in several million copies. So with other collectors. Plant collections sometimes made from similar motives – just from the collecting standpoint. Or made for serially. This book of mine not for any of these but solely for those who are or are going to be scientific Botanists, the materials to be used for real research. The ecologist of all Botanists is most careless or indifferent to making adequate or useful spms. One of my friends, a brilliant ecologic mind, enterprising, energetic, resourceful, original and sound, yet gives no attention to the securing of proper plant specimens. cf. p. 476, 463, 6. p. 268, 399.

Subjects for Discussion, Cal. Bot. Soc.

1. History of introd. and the immig. of weeds in Calif.
2. Lessons from the lives of the later Cal. Bot. explorers. Investigation of the facts of their lives: Patton, Bridges, Lemmon, Congdon, Loff.
3. A New Standard of Scientific Records in preparing plant spms.
4. The Distribution of Plants in Relation to Climate. cf. ref. on p. 482.
5. The Life-Zone Concept. cf. latter by Kinsey.
6. Eucalyptus globulus in Cal. and in Palestine.
7. What is Science?
8. Activities of the plant at night.
9. Mesembryanthemums.
10. Hutchinson's Arrangement of Families.
11. Phylogeny of Angiosperms
12. The Most Primitive Angiosperm.
13. Physiography in relation to Plant Distribution. (cf. Huxley, Physiography.)
14. Vegetative characters as genetic evidences.
15. Economic resources of native plants.

Mules

- Cf. Pisistratus the Tyrant. Herodotus, vol. 1, p. 27 (Evergreen Library.)

- A kingly privilege to ride on a mule (cf. Kitto, Stand Cycl. 108). Best mules came from Bassora. Cf. p. 250 supra; p. 251 supra.

- Borax 24-mule team. 16-mule harvester team. Freighter teams with bells.

- To Mrs. A.E. Clark:— I wish you to photograph for me a South African mule, preferably a close-up portrait of the head, though the circumstances might make the life-form of the animal desirable also. I will leave that to your taste and discretion. This may seem like an odd request — but I have always had an interest in mules (being my main reliance on botanical expeditions in the Sierra Nevada), an interest which has been intensified by the Syrian mule. If dress makes the man, harness ornamentation transforms the mules of Beirut and Tripoli into most wonderful creatures. I had never before conceived or even dreamed of such rich and ample necklaces of colored beads as are worn by these animals on the Syrian coast, and their bridle gear is often similarly and no [Cont. p. 461.]

Horses

"The horse, of all cattle in the desert, is most impatient of thirst." — Doughty, Wanderings in Arabia, vol. 1, p. 72.

"Wallah, in all the desert no man feare to kill a stranger." — l.c. 114.

"Before he is thirty a man is only a sketch, an approximation, dominated by the common sentiments and common loves of all." — Papini, Life of Christ, p.

"increased and developed with the beneficent fruitfulness that almost always attends an evil deed skillfully executed" La Bodega, Ibanez, p. 64. "whose virtue is not put to proof by misfortune", l.c.

- The dispenser of credit and of honor where there are due is a kingly role; it is a greater role than taking credit to oneself for things done. — W.L.J.

- Fasten on abiding issues, rescue us from the temporary and transient. — Lord Acton.

Rail: Travel Equipment: Steamer.

- Toilet articles { Hair Brush, Comb. Clothes Brush. Soap box and Soap. Razor. Razor-strop. Tooth-brush. Towel.

There is no need of more than one razor for a 6 or 8 mos. trip.

— Clothing { Dinner suit. One every day suit of medium weight. Two pairs shoes (one black, and one cloth-leather for comfort. One pair bedroom slippers. One overcoat. One sweater. One cap. One hat. One raincoat.

Underclothes { Two pair light-weight suits. One suit woolens — very heavy. Two suits BVD's. Four pair socks { 2 heavy woolen, 1 heavy cotton, 1 medium woolen } 1 suit pyjamas.

Shirts { One full dress. 3 common shirts 1 doz. collars. 1 army shirt. Two sport shirts. 8 handk. 3 ties.

Miscellaneous. { Umbrella. Hot-water bag. Needles and black + white threads. Shoe blacking and polishes. 1/10 paper pins Calling cards, social and professional. Assortment shirt and pants buttons.

Medicines { Cascara Sagrada capsules. Sodium bicarbonate. Boracic Acid Crystals. An anti-dysenteric. Listerine

Comment on list:- One does not need a bath-robe; an overcoat does well enough. Bedroom slippers could be dispensed with. One pyjamas will do. Laundrying usually takes only 1/5 3 days and one can substitute an undershirt for pyjamas if need be.

The great objection to so many things is that it takes time to pack at each change of hotel. One is far more likely to lose articles if one has many than if few. One leaves behind in hotels necessary articles like soap, strop, comb, etc.

— Preparation for journey.

1. Sew on all buttons double strength. This pays, especially shirt buttons.
2. Have teeth examined.
3. Medical certificate from physician.

Miscel. — Colored specs. Extra pair regular specs. Camera (small). Toothpicks

Dr. I. Rashad
Director
Co-operative Section
Ministry of Agriculture
Cairo

Vol. p. 3½

Cont. p. 473.

Shipments to Washington,

Cont. p. #605.

Office Foreign Seed and Plant Introduction

- Parcel of seeds from Egypt, Parcel Post No. 213 — Mar. 27, 1926.
- Parcel of seeds from Palestine, Parcel Post no. 214.— Mar. 27.
- Report no. 1.— Scientific Personnel in Egypt.— circa Mar. 27.
- Report no. 2.— Observations in Egypt, dated.— circa Mar. 27.
- Package of Seed Cats. etc. from Jerusalem, about Mar. 27.
- Package of Vicia ervilea, May 1.
- Report on Cotton in Egypt. Rep. no. 3
- " " work in Palestine. Rep. no. 4. May 12.

Railway and Steamer Fares

- Cairo to Jerusalem — 427 piasters. 1st class
  Sleeper 130 piasters. — 270 piasters 2d class.
- Cairo to Jaffa, 2nd, — 251 piasters.
- Berkeley to New York return, $196.56
- Ocean fare, Southampton to New York.... $145.00
- " " New York to Alexandria $450 ??
- Sleeper, Cairo to Luxor, one night, $7.50
- Jerusalem to Beirut £ 2 Egypt. (can be done for £ 1½)
- Port Said to Plymouth £ 33+ 50 piasters boarding fee at Port Said and 8 s. landing fee at Plymouth.

Steamer lines.

- Fabre line — Brooklyn, N.Y. to Mediterranean also to France. (direct.
- Sitmar line —
- White Star Line advertises (Sat. Eve. Post, 2-27,-'26) round trip to Eur. $190?? all third class (ship Minneka Da).
- Long lists of steamer lines in any daily issue London Times.

Botanists in Palestine. bb. p. 462

- J. F. Dinsmore, American Colony, Jerusalem.

- Dr. E. Rubinovitz, Hebrew University, Jerusalem. He is preparing a dictionary of Latin - Arabic - Hebrew names of plants of Palestine. Fasc. 1. publ. in 1917. It is in Hebrew. Prof. of Bot. He is at present in Vienna working on this opus.

- A. Eig, Zionist Organization, author of "A Contribution to the Knowledge of the Flora of Palestine". Feb. 1926. Tel-Aviv, Palestine.

- Prof. O. Warburg, Director, Division of Biology, Institute of Agr. + Nat. Hist., The Zionist Organization and the Hebrew Univ.

- Mr. Amram Khazanoff, Dept. of Experimental Agriculture, Palestine Jewish Colonization

See p. 462

Association, Haifa, P.O. Box 67.

Shipments to Washington. ⚓?

Cont. from p. 470 and 460r.
See also vol. 44 p. 32.

- Report on work in Palestine. Rep. no. 5. This and no. 4 are brief and relate chiefly to the shipments of parcels of herb. spms., their receipt at N.Y. and safeguarding. Mailed from Haifa, May 13.

- Report on personnel in Palestine. Rep. no. 6, dated Apr. 1, Jerusalem. Mailed from Kew, June 12.

- [Report no. 3. cfp. 470. Mailed from London, June 3.]

- Report no. 7. Observations in Palestine. Dated Jerusalem, Apr. 26. Mailed from Kew, June 15. [Not so mailed. See vol. , p. 32, for later note.]

- See p. 496 infra; vol. , p. 32.

- Silva of Cal. Send to Hefnawi, Shawky Bey Bekir, Aziz Bichai, Zulficar Bey, McAuliston, J.E. Jaffa.
See p. 493, 487, 175, 176, 214, 241.

Silva of California:
Send copies to following: President Dodge, Beirut; Karl Bruwell, Beirut; Grasovsky, Jerusalem; Col. Nathan, Jaffa.

Flora of California

- Les Chenopodium ambrosioides et anthelminticum different-ils specifiquement? [Bull. de la Soc. Bot. de France, Tome 53, 1906.]

- A picture is worth 10,000 words.
  - Chinese Proverb [Art and Archaeology, vol. 21, p. 75, — 1926].

Ancient Forests in the Near East

Cf. pages 147, 433, 456

History of California Bot. Explorations

The Old California Missions and Historical Houses of Churches by Bernard Newcome (J.B. Lippincott Co. 1925). Consult in connection with the travels of Coulter, Douglas, etc. who used these missions as inns

Botanists at Jaffa-Telaviv.

- Dr. Reichert, Plant Pathologist, Institute Agr. + Nat. Hist.
- Mr. S. Zemach* Extension Dept., Institute Agr. + Nat. Hist.
- A. Eig, Systematic Bot., " " " "
- Dr. O. Warburg, Director, " " " "

cf. p. 262.

* brother-in-law of Aaron Kazenoff.

Trees of California. - Notes.

- Cf. Readers Guide 5:1481.
" Overland Mo., Oct. 1924, p. 447.

— Dis law as steadfast as the throne of Zeus,
Our days are heritors of days gone by. — Aeschylus,
Agamemnon.

— "From witches, warlocks and wurricoes, and from 'a things which gang bump i' the nicht," says the old petition, "Guid Lord deliver us". — London Daily Mail, June 7, 1926.

- Collecting: Preparing Plant Specs.
See supra pages 272, 308, 328, 356, 370, 462, 463; vol. , p. 82, 81, 13

Personnel

- Dr. C. S. Fisher, in charge, Megiddo.
- Mr. D. F. Higgins, geologist and engineer.
- Mr. E.L. de Loach,
- Mr. J. Stanley Fisher, nephew of Dr. Fisher.
- Mr. John Kellogg.

- Dr. Harold Nelson, Luxor.
Hayden

- Megiddo Expedition, Haifa, care Barclays Bank; (until Mar. 25) for Higgins.

Wanted by D. F. Higgins:
Pair of forceps, Scalpel.
General text Systematic Botany.
Driers. Seed Pockets.
Economic Flora.

478 "Natural History and Natural Science" in the Bible.

- "The wind goeth toward the south and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits." - Eccl. 1:6.
- Agriculture. Kitto, Cyel. Bibl. Lit. 41.
- The Path through the Wheat.
- The High Places of the Countryside
- Oleanders, Tamarisk, "Cedar", Fabiana, Locust, Yellow Rose, Fig (Missions), Vine.
- "For lo the winter is passed" Song, 2:11-13; 7:12.
- "A land of wheat, and barley, and vines, and fig trees, and pomegranates; a land of oil olive and honey." - Deut. 8:8

Pictures by Badé:
across hill. down hill
Karnak - Hypostyle Court. Algiers - Bot. Yard. Lane of Araucarias - Bade. Acropolis - myself on ledge.
Muski - Jefson, Luxor - across the Ramesseum. Dead Sea - the three. Cauliflower Mkt., Jerusalem.

Arab Characteristics

Trachoma, p. 431.

Am. School Or. Research, Jerusalem

Dr. W. F. Albright. Dr. Mrs. R. P. Dougherty (Yale Univ.)
Prof. and Mrs. G. G. Macurdy, Yale Univ.
Dr. & Mrs. J. E. Wishart, San Anselmo
Dr. Blank. Dr. Rosenblatt. Dr. J. R. Marcus.

Economic Botany

notes for Flora.

- Loquat. cf. p. 133 supra. The fruit should be carefully described and its uses noted.
- Morus. cf. p. 132. The history of the introduction of silkworm culture into Europe is very romantic. It was done at the instance of Justinian. Cf. Encycl. Britt., Silkworm.
- Pumpkins and Squashes. Dr. L. H. Castetter of Iowa State College. Paris on of. cf. note in Bank. Gaz. Dec. 30, 1925.
- Length of kelp for Allan Carpenter.
- Botanical Charts. Der Gift plan Deutschlands, by Dr. P. Essern, Köln. Verlag von Friederick Vieweg and Sohn. Braunschweig.
- The Wheat Plant by John Percival (Duckworth).
- Wild & Cult. Cotton Plants of the World, by Watt. & Sir Geo.
- Cotton, see p. 116, supra.
- Habit-difs. (in field), barley and wheat.
- Ripe and green olives in Cal.; amounts, packed
- Banana and plantain; difs.

Hotels

- Hotel Savoy, Luxor, 100 piastres a day
- Hotel Windsor, Alexandria, Egypt. excellent
- Hotel Nassar, Haifa. 100 piastres a day.
- Hotel Metropole, Beirut (75 pias. Egy.

New York.

York Hotel, 36th st. and 7th Ave, $2.00
Navarre " 38th " " "
Grand " Broadway & 31st " "

London.

near British Museum

- Dean Hotel, Oxford st. R & Breakfs
- Imperial, Russel Sq., R. Bath, Breakfs. 8/6
- White Hall, Bloomsbury Sq. 8/6
- " " Guildford st. 7/6
- " " 2 Montague st. By
- " " 92 Lancaster Gate } week

Books -

- Dictionary of Botanical Equivalents. Atschwager & Smiley. Williams-Wilkins Co.
- Schweinfurth, in a booklet on Helwan, a list of plants near Cairo.
- Oxford World's Classic Pocket Series
- Ruskin's Studies on Landscape in "Everyman's Library."
- Flinders Petrie, Arts and Crafts of Ancient Egypt.
- Book on Classical Mythology.
- Farm Sermons, C. H. Spurgeon. London. 1882
- Post, Geo. E., Flora of Syria and Palestine. 1896
- Rex Clements, Bark Arethusa, a tale of the seas in the 4as.
- Sedgewick, English geologist, letters, c. 1910 Murchison, geologist. Hall, Book on the beginnings of Am. science (he is a geol.) - note from D. F. Higgins.
- Zeller, [Popular ?] Flora of Palestine.
- David F. Houston, Memoirs of Wilson Cabinet.
- Boissier, Fl. Orientalis
- DeCandolle, A. P., Prodromus
- Journ. Roy. Geo. Soc. Nov. 1925. art. on Distribution of Plants in Relation to Climate (Saulsbury) (Univ. of London.)
- Die Flora der Judeen. Löw, Emanuel. Vienna (1924)
- R. H. Thornton, Glossary of Amuri-Cavisma.
- Meisterman, Guide to Holy Land (Oates, London)

Books. - cf. p. 461.

- Reno Muschler, Manual of the Flora of Egypt. Friedlander. Berlin. 1912.
- B. Daydon Jackson. Biography of Geo. Bentham. English Men of Science Series. Circa 1912.
- Geo. Adam Smith, Historical Geog. of the Holy Land. London: Hodder & Stoughton. 1902.
- Pliny, Natural History
- Tristram, H. B., The Land of Israel, (1865) A Journal of Travels in Palestine.
- Aesop's Fables (Murray Albemarle st. London, W.
- Gertrude Bell, Syria: the Desert and the Sown.
- Adams, Self-Educator in Latin. (Hodder & Stoughton.)
- Pliny. Letters of Caius Plinius Caecilius Secundus. Trans. by Melmoth. Geo. Bell & Sons. London. 1909.
- Try Walter Spencer, 27 New Oxford st., London for books.
- Handbook of Palestine (semi-official, about 1924.

Desired Plants

- Gossypium — cultural
- Berberis — re. pine Blister rust.
- Rhamnus — re. wheat rust
- Ceratonia siliqua (Carob Tree). Sugar material around the seeds.
- Corylus. Hort. vars.
- Legumes & Grasses & Cereals & Drought Resistant Plants, Forage Plants.
- Rice in Mesopotamia. Barley.
- Lallemantia iberica, oil-producing, native of Palestine.

Palestine Addresses.

- Major Nathan, Inspector.
- " Symmes, Chief Secretary to High Com.
  Newrock, Chief Assis. to the Secretary.
- A.C. Grasovsky - seed Olneya seed, Parkinsonia spp., Hakea, Kangaroo Thorn.
- Mr. & Mrs. Edwin Herbert Samuel (Hadana Samuel) Mt. Carmel House, Herod's Gate.
- Dr. J. R. Marcus. Hebrew Union College Cincinnati O.
- A. S. Hart, Y.M.C.A., Jerusalem.
- J. F. Broadhurst, Ass't Inspector-General, Police and Prisons

Egypt - cf. p.117, p.487.

- Robert Wayne Burns, 6 Sharia Nubar Pasha, Cairo
- Birchner, Alfred., Middle Egypt Botanic Garden, Matania El Saff. (Independent Garden).
- Horticultural Section, Ministry of Agriculture, El Gizia (Muderiya), Cairo. (Tewfik Fahmy - Bot. & Pl. Breeding Sect.)
- Traders and Growers Union, 5, Sharia Abdelhak Sombati, Cairo. (Importers & Dealers, Seeds, Plants, Nursery Stock, etc.)
- A. Shams Eldin, French Hospital Str., Abbassieh, Cairo (Agricultural Engineer).
- Societié Sultanniene d'Agriculture, Box 63. Cairo. J. A. Prescott apparently in charge.
- Youssif Milad, Berkeley.

Mesopotamia

- Roger Thomas, Director of Agriculture, Serai, Baghdad.
- Col. J.M. Birch, Managing Director, Mosul Farms Station, Mosul.
- Zwemer, Dr. Samuel.

See p. 494.

— Gertrude Bell.

"For picturesqueness Hamah is not to be outdone by any town in Syria". Orontes River. House of Khalid Beg 'Azam, the most beautiful in the city, as beautiful as the famous 'Azam house in Damascus.

El Barah is most marvelous and most beautiful. It is like the dream city which children create for themselves to dwell in between bedtime and sleeptime, building palace after palace down the shining ways of the imagination, and no words can give the charm of it, nor the magic of the Syrian spring. (An empty city).

Baalbek, Temple of Jupiter. "crowned its doorposts, architraves and capitals with ornamental

devices infinite in variety, as they are lovely in execution."

Egypt — Cairo. Cf. p. 117.

— William Carlton McAuliston, American University, Cairo.
— Simpson, Ministry Agr.
— Royal Society of Agriculture.
R. S. Sennet.
William J. Luggard, see p. 184.
Wilcox
— Freeman, Geo. F. (no longer here).
— Branch, Director Animal Sect. (uncle of Sennit)
— M. Rahim, Librarian.
— J. A. Prescott, The University, Waite Research Institute, Adelaide, South Australia.
— Brown Morris, breeding wheat
— Professor W. J. Hefnawi
See p. 117. p. 176. College of Agriculture, Giza, Egypt. (6, Tooka el Sharki st., near Ministry of Finance Cairo.) See p. 117.
— Shawky Bey Bakir, College of Agr.
— Prof. Mohammed Askar, " " " See p. 177.

Addresses.

— Dr. Dolly C. Lutzeharms, Dept. of Botany, University of Utah, Salt Lake City, Utah.

— Dr. T. D. Beckwith, 638 Fhe Alameda, Berkeley.

— Neill C. Cornwall, 2330 Chapel st., Berk.

— Geo. B. Furniss, 375 Staten st., Oakl.

— K. K. Mackenzie, 150 Broadway, N.Y.

— Ansel F. Hall, 957 Regal Road, Berkeley.

— Stack, Miss Katharine, 2526 Valley, S.F.

— Dr. W. H. Kellogg, 970 Chestnut st., S.F.

— Kelley, Mrs. H. P., 4277 Jackdaw st., San Diego.

— Geo. Williamson, 579-38th st., Oakland

— Will Franklin, 130 York Drive, Piedmont

— Karl J. Hendricks, 316 Oaks st., San Leandro.

— Amy Rinehart, 540 E. 7th st., Oakland

— Card, E. F., 2677 Larkin st., S.F.

— Mrs. Harland, 2803 Forest ave., Berk.

— Prof. & Mrs. P. B. Kay, 955 Mendocino, Berk.

— W. C. Anderson, 326 Adams st., Oak.

— Ethel M. Arches, 545 Sutter st., S.F.

— Dr. J. W. Roush, 3021 Richmond ave., Oakland.

— Dr. E. E. Alden, Occidental College, L.A.

— Violet Richardson, Stratford & Berkeley Rooms, Berkeley.

— Raymond Ramsby, Call Bldg., S.F.

— Mrs. Geo. B. Gray, 4807-11th ave., L.A.

— Francis P. Farquhar, 2728 Union st., S.F.

— Mary Pond, 762 Mandana Blvd., Oakland (care Mrs Mary Combs, Bank of Montreal, 6 Vendome Pl., Paris (in May).

— Dr. H. C. Palm, Berkeley Inn.

— Dr. Geo. C. Pardee, 672-11th st., Oakland.

— Anna Florence Brown, 600-22nd st., Oakland.

— Mrs. E. L. altrahn; Wm P. McKannay; H. R. Harvey,

— J. A. Bettys, San Benito.

— Earle J. Chandler, Harry A. Jayton 149 New Montg st.

— Rebekah Jewett, 704-W 44th st., L.A.

— Charlotte M. Hoak, 1125 Stratford ave., S. Pasadena.

— A. A. Ehlers, 2741 Prince st., Berkeley

— Doris Satchell, Santa Rosa

— E. J. Holmes, 811 Santa Barbara ave. Berkeley.

— Susan V., 2422 Channing Way, Berkeley

— Elizabeth Perry, 1436 Hearst ave. Berk.

— Ralph Hopkins, Veeum. B.C. S.S. Box 308

- Lamanny Tinsley, 3017 Wheeler st. Bark
- Mrs Monosmith, 2642 Bancroft way Bark.
- Boyce Thompson Southwest Arboretum, in charge Professor Crider, on Ocean-to-Ocean Highway, in Ariz. P.O. Superior.
- Elsie May Zeile, Warrington Apts., 775 Post st., S.F.
- Frank J. Frost, Ojai (friend of Dr. Morris of New York).
- Dorothy Dyar, 610-W. 116, N.Y.
- Marion R. Parsons, 29 Mosswood Road Berkeley
- R.J.H. DeLoach - Director Bureau of Agricultural Research & Economics Armour & Co - Chicago, Ill. or Armour Fertilizer Works.
- Mrs. A. Frederick, 1201 Henry st., Berkeley.

Second-hand Books - N.Y. City

- F.C. Stechert, 126-E. 28th st.
- G.E. Stechert, 151-W. 25th st.
- H. G. Fielder, 18 Vesey st.
- Frank Walters, 144 E. 59th st.

High Officials

- General Dupont, French High Com. in Syria.
- Riza Khan Pahlevi, Dictator of Persia.
- Sir Geo. Lloyd, Brit. High Com. in Egypt.
- Mr. Smith, Adviser to Minister of Education, Bagdad (Relative of Mrs. Goodspeed).
- Sir Henry Dobbs, Brit. High Com. in Iraq.
- Sir Percy Cox, former Brit. High Com. in Iraq.
- Sir John Philby, Brit. High Com. in Palestine, formerly at Bagdad. (= Sir Ronald Storrs).
- Sir Hubert Samuel, former Brit. Com. in Palestine.
- Lord Plummer, Brit. High Com. in Egypt.

Ramallah, Palestine.

- A. Willard Jones, Friends Boy's School. see p. 284.
- Rev. A. E. Kelsey, Mission Pastor.
- Mrs. Kelsey is a sister of Mrs. Bacon. See p. 462.
- Dr. Fosdick of New York, p. 280.

- Mandragora (Mandrake). One of the plants used by the poets: Ben Jonson, in Sad Shepherd: Maudlin, the venomed plants with which she kills, the sad mandrake, whose grooms are deathful, nightshade and hemlock, and mortagan.

- Marschal v. Bieberstein, F. A. Flora Taurico-Caucasica. 3 vols. 1808-1819.

Bagdad Addresses.

- J. H. Webster, Chief Inspector of Agr. in Bagdad.
- Experiment Farm = Rustam Farm on the Diala River (2000 acres).
- Jackson, asst. Bot. from England.
- Roger Thomas, Cotton Expert, former Director of Agr. in Iraq. All the above from Mr. Todd.
- Hotel Mode.
- Hotel Oriental.
- Mr. Datta, Entomologist.

- Knowles Ryerson, Service Technique du Department de l'Agriculture, Port-au-Prince, Republique d'Haiti.
- Prof. Y. E. Galeo, 144 High st., Keene st., N. H., U. S. A. Send him copy Silva of Calif. He is Prof. of Biology in the University of Rangoon. Met him in Cairo, Mar. 1926.
- Prof. W. C. McQuiston, American University, Cairo. Send him copy Silva of California.
- Wilbert Smith, Sec. Y.M.C.A., Cairo.
- Donald Atwell, Educ. Sec. " "
- Robert Wayne Brooks, Y.M.C.A. Cairo.
- Karl Buswell, American Mission (until Apr. 1) Send him. Beirut.
- A. Willard Jones, * Ramallah, Palest. Friends Boys School.
- Keith-Roach, Asst. Commissioner, Haifa, Palest.

* Send him Torkington's "Seventeen".

Palestine + Near East.

- Dr. Samuel Zwemer, Cairo Univ., N.Y. (el Dekkah.)
  Office = [Cairo, Sednoui Bldg., Sh. Kantarek]
- Dr. Altoniyan, Aleppo (Armenian Physic.)
- Dr. Wilfrid Post, Constantinople. (Mrs. Emrich)

- Haifa Exp. Sta., Haifa
- Jewish Agric. Exp. Sta., Jerusalem.
- Jaffa Agric. + Coloniz. Dept., Jaffa.
- Roger Thomas, Director of Agric., Serai Baghdad, Iraq.
- Col. J. M. Birch, Managing Director, Mosulo Farm Sta., Mosul, Iraq.
- Rev. Alfred E. Day, American University, Beirut, Syria

The above 6 address from Rolan McKee, office of Foreign Seed and Plant Introd., Washington.

- Barclay Acheson + Jacemuth, Athens, in charge relief work.
- Mrs. Howard Bliss, Beirut.

Above given me by Mrs. Jeannette Emrich, Federal Council of Churches 22d st + 4th ave, United Charities Bldg., N.Y.

- Dr. Bertram Van Dyck Post, Robert College.
- Truffle of Bagdad. Turfezia leonis

Palestine Addresses.

- Mrs. Janette Emrich, Federal Council of Churches, 22d st and Fourth ave., United Charities Bldg., N.Y.
- Mrs. Howard Bliss, Beirut (through Mrs. Emrich).
- Barclay Acheson and Jakemuth, Athens in charge relief work (Mrs. Emrich).
- Bayard Dodge, Syrian Protestant Coll., Beirut.
- Dr. and Mrs. E. St. John Ward, Beirut.
- Amran Kazenoff, Jaffa (Exp. Sta.) (Pal. Jew. Col. Assoc.) (W. W. Mackie). Haifa
  P.O. Box 67 Berseem. Sesame. (See p. 465)
- Haifa Experiment Sta., Haifa
- Jewish Agr. Exp. Sta., Jerusalem.
- Jaffa Agricultural + Colonization Dept., Jaffa.
- Miss Effie Newton, Haifa.
- Dr. W. F. Albright, Director Am. Sch. of Archaeology.
- A. C. Grasovsky, Forester, Berkeley, gives me the following addresses:

  Edwin Herbert Simon, son of Sir Herbert Simon, govt official, grad. Oxford.
- Prof. Dr. Warburg (Agr. Dept. Zionist Organ.)
- E. Rubinovitz, teacher of Grasovsky, investigating biblical plants.
- Zionist Organization, 55 - 5th ave., New York.

E. United States.

- G.E. Stechert, 31 - E. 10th st., N.Y.
- B. Westermann, 32 - E. 20th st., N.Y.
- Fielder, 18 Vesey st., N.Y.
- Farm Hands Club, every Tues. in Wash.
- National Research Council: Dr. H.L. Shantz; Dr. J.A. Stevenson, proxy for Fairchild. B & 21st sts., Wash., D.C.
- Roland McKee, Office Foreign Seed and Plant Introduction, Bur. Pl. Ind., Wash., D.C.
- Brooklyn Botanic Garden.
- Univ. of Penn., 36th st. & Woodland ave., Phil. (Bot. Lab.)
- Holly Hotel, Washington Sq., 20th st.

Mail Shipments Home

- Kitto Dict. Southport to 11 Mossyard Rd. Apr. 2.
- Greece, Baedeker " " " " "
- Luxor Photog. " to Laboratory Pharmacy Botany, 201 Botany Apr. 2. Apr. 2
- Parcel books (Post's Fl., Smith's Hist. Geo. Pal. 2 vol Herodotus, Baedeker's Paris), parcel post number 564. - May 15. Also oiled silk (no. 563) and sleeping bag (562). - May 15.

- See also pp. 470 and 473 above; and vol. , p. 32, also p. (at end vol.)

London:

- Royal Society of Arts, John st., Adelphi, London, W.C.
- Walter Spencer, 27 New Oxford st., London (a book place patronized by Major Gottaches)

Mercantile Trust Co., Letter Credit, no. 6131, dated Dec. 15, 1925. £4000 0 2

- Theft Insurance. Lewis C. Smith Agy., Globe & Rutgers Fire Ins. Co., N.Y., 140 William st., New York; theft, fire, etc - Form Ano. 8612.
- Steamer ticket receipt. Royal Mail Steam Packet Co., Atlantic House, Monument gate st., London, E.C. N.Y.P. 42995. Signed: A.G. Albertson, S.F. Dec. 21, 1925. $145. Orca, July 30, 1926, Southampton. Berth Lower 530.

- S.P. Railway ticket N.Y. to Berk. no. 2574E, Form 8441. Coupons = Form 5991 no. 24052. Dated Dec. 22'25 " 7869 no 7412. Limit " " '26 " 7116 no. 34451.

Addresses.

Paris –

Le Comte, Director

Jagnepain, Vice-Director

McLew,

– L. A. Dode, 4 Place du Maine,

Board of Research:

Jan. Pay Roll, Joyce M. Saunders, 164 hrs. @ 50c .. $82.00 Dated Feb. 28. Jerusalem.

Report of Progress to President, dated Mar. 20, Cairo. Also application for continuation of project and use of unexpended bal. after July 1.

Feb. Pay Roll, Joyce M. Saunders, 134 hrs @ 50c. $67.00 Dated Apr. 2, Jerusalem.

– Botany Research No. 115.

– Registration Day, Aug. 16.

– Int. Cong. Pl. Sciences, Aug. 16-23, '26 Ithaca, New York.

Index to Personal Addresses

– Ramallah, Palestine, 491.

– Cairo, Egypt, 487; 485

– College of Agr. & Ministry of Agriculture, Egypt, 117.

– Jerusalem, 484.

– Am. School of Oriental Research, 479;

– Megiddo, p. 477.

– Tel-a-viv (Jaffa), 475.

– Palestine, 472.

– Beirut, 462.

– Haifa, 462.

S.S. Adriatic

Mr. and Mrs. Yount,
Dr. A.C. Harte, y. M.C.A., Philadelphia. Jerusalem.
Gordon Lee, Rhode Island.

August E. Brooker, St. Louis,
known Duggan. Moore,
and Von Schrenk

— Mr. J.A. Baillargeon,
Rainier Club, Seattle.

— Mrs. Augusta Jones,
(her son = John Locke, in
philosophy, at Stan-
ford formerly).

— Miss Billing

—

Washington, Indiana.
Says she has 4 fellow-
townsmen, Jepsons, an
"aristocratic family.")

—

Bro

— Mr. & Mrs. Eugene Bolton,
48 York Terrace
Regents Park, N.W. 1.
London

Purchases - Aug. 1926

- Nicholson Files. Ask for cat. of C. J. Krogness, 1st Natl Bank Bldg., S.F.
- 3-in-1 oil for ironing, razors, etc. 3-in-1 Oil Co., 130 W. Wm St., N. Y.
- Field Books - 200 pages - linen paper, real leather.
- Scales - weighs to 20 lbs (65¢), also 40 and 60 " " ozs. Hanson Scale Co., Chicago
- Field Lens. Botanical Pick. Name tag for Field Press.
- Eastman Paper Knife No. 20.
- Ernst Leitz - Wetzlar Binocular. Eyepieces @ 5-10X, @ 10-20X, @ 15-30X
- Nickel can with cover for sugar or toilet set.
- Stocking suspenders
- Steel Letter File.